

**UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS**

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**SPECIAL FEATURES IN THIS ISSUE**

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**UNITED STATES DEPARTMENT OF LABOR**

W. N. DOAK, Secretary

**BUREAU OF LABOR STATISTICS**

ETHELBERT STEWART, Commissioner

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MONTHLY

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**CERTIFICATE**

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General  
Gift  
W.S. - 20.

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## This Issue in Brief

*The Swiss system of unemployment insurance dates from 1924, although previous to that time a few local experiments had been made along this line.* As Switzerland is a federated State of 25 Cantons, each of which has the right to legislate upon all questions not expressly reserved to the Confederation, the various Cantons have been allowed much latitude in putting the insurance into effect. The participation of the Federal Government is limited to the extension of subsidies to Cantons fulfilling certain minimum conditions. While most of the Cantons have made unemployment insurance compulsory for factory workers, insurance for nearly all other classes of labor is voluntary, and in a few Cantons insurance is optional with all classes of workers. In 1929 there were in Switzerland 175 unemployment insurance funds of all types, with a combined membership of 292,999. Page 20.

*A widespread practice of restriction of output by unorganized workers was revealed by a recent study of the subject.* The study was made from first-hand observations by the director of the Springfield, Ohio, Chamber of Commerce, who obtained jobs in various lines of work for the purpose. The ways in which restriction was practiced ranged from a careful slowing down of effort to planned waste of time by inefficient methods, dawdling, going over and over the same piece of work, etc. The reasons leading to the practice included the belief that increased effort would simply result in increased demands and a corresponding cut in rates; the belief that the less effective workers would not be able to keep up with the increased pace, and would therefore lose their jobs; the worker's fear of working himself out of a job; and, occasionally, personal grievances against the management. Page 77.

*Vocational education for both young workers and adults is now nationwide.* This branch of public education has developed since 1917, when the Smith-Hughes Act was passed providing Federal assistance to States undertaking vocational training. At the end of the fiscal year 1929-30 there were 3,911 all-day vocational schools, 691 day-unit schools, 426 part-time schools, and 2,204 evening schools—a total of 7,232—which were receiving Federal aid for instruction in agriculture. These schools had a combined enrollment of 194,858 pupils. The federally aided trade and industrial schools and classes numbered 2,352 and had 618,674 pupils. In addition, 82,654 persons were taking vocational training in schools organized under approved State plans but not receiving Federal aid. Page 1.

*In May, 1931, approximately 18 per cent of the working population of Cincinnati were unemployed, with an additional 19 per cent working only part time.* This was shown by a census just completed in that city. The figures reveal that there were more than three times as many unemployed this May as were shown by a similar census two years ago and nearly four times as many working part time. As compared with 1930 there were more than twice as many unemployed and almost twice as many working part time. Page 65.

*A similar census made in Philadelphia in April, 1931, showed that at that time 25.6 per cent of the working population were wholly unemployed,*

while an additional 13.8 per cent were working part time. At the time of a survey made in December, 1930, there were 24.9 per cent out of work and 24 per cent employed part time, showing a decrease in the number of part-time workers and a slight increase in the full-time employment. Page 66.

*Although only a few State labor departments are entirely self-supporting, considerable revenues are derived from the administration of some of the labor laws.* In eight States the revenues so derived amounted to more than \$100,000 in 1930, while in one of these they were more than \$1,500,000. The largest revenues in the administration of labor laws come from the operation of the workmen's compensation acts; in 13 States these laws are entirely self-supporting in their operation. In a number of States, however, such revenues are very small in amount. It is suggested that as State labor departments are experiencing great difficulty in obtaining sufficient funds to discharge their duties efficiently the finding of sources of revenue is a matter to which they may well give attention. Page 52.

*A remarkable expansion in the strip mining of bituminous coal has taken place since before the war.* In 1915, according to a recent report of the United States Bureau of Mines, only 0.6 per cent of the total output of bituminous coal was mined by this method; in 1928 4 per cent was so mined. The increase has been due to the economic pressure of shifting prices and wage rates, as well as to technical improvements in mining methods. Page 85.

*Figures giving the mortality among the members of the International Typographical Union show a reduction in the mortality from pulmonary tuberculosis from 1929 to 1930.* During the same period there was also a decrease in the deaths from both cancer and diabetes, while the mortality from chronic nephritis remained practically the same. Because of the hazard of lead poisoning in the printing trades, it is significant that during 1930 not a single death was attributed to lead poisoning. Page 95.

*In view of the high cost of illness in this country, it would seem that the provision of medical care offers a real opportunity for cooperative effort.* Nevertheless few cooperative groups in the United States have as yet taken advantage of this opportunity. Many cooperative societies in foreign countries, however, are providing medical treatment or sick benefits, are running health camps for children and members, or are doing sickness-prevention work of various sorts. In a few instances, well-equipped hospitals are operated by the cooperative societies. Page 114.



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**Organization and Scope of Vocational Education in the United States**

**A** NATION-WIDE movement for vocational education of lower than college grade for young workers and adults has grown out of the assistance given to the States by the Federal Government under the national vocational act of 1917 (39 Stat. 929), known popularly as the Smith-Hughes Act.

Responding to the organized demands of trade-unions and practical educators interested in promoting real vocational training in the public schools, Congress created in 1914 a Federal Commission on National Aid to Vocational Education. Under the act establishing this body (38 Stat. 767) the President was directed to appoint nine members "to consider the subject of national aid for vocational education and report their findings and recommendations not later than June 1 next."

President Wilson appointed four Members of Congress—Senator Hoke Smith of Georgia, Senator Carroll S. Page of Vermont, Representative D. M. Hughes of Georgia, and Representative S. D. Fess of Ohio—and selected the other five members of the commission largely from organizations most interested in the movement. These members were John A. Lapp, then secretary of the Commission on Industrial Agricultural Education of Indiana; Florence M. Marshall, director of the Manhattan Trade School for Girls; Agnes Nestor, of the American Federation of Labor; Charles A. Prosser, at that time secretary of the National Society for the Promotion of Industrial Education; and Charles H. Winslow, a special agent of the United States Bureau of Labor Statistics.

The commission organized on April 2, 1914, and reported on June 1 of the same year. It advised nation-wide promotion of vocational education and recommended Federal aid to the States to that end. Most of the program and recommendations of the commission were later embodied in legislation introduced into the next Congress and passed as the Smith-Hughes law, which, as set forth in its title, is "an act to provide for the promotion of vocational education; to provide for cooperation with the States in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure."

The act created its own administering agency in an independent Government establishment known as the Federal Board for Vocational

Education. This board is composed of seven members, four of whom are ex officio—the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labor, and the United States Commissioner of Education. One of the three “lay” members is appointed to represent manufacturing and commercial interests, one the agricultural interests, and the third, labor.

The law which the Federal board administers provides financial aid to the States for the promotion of vocational education in public schools, but it limits the extent of that aid and sets forth a definite program of cooperation to which States must subscribe in order to benefit under the act.

The Smith-Hughes law became effective on February 23, 1917, and by the end of the year all 48 States had accepted the principle of Federal aid for vocational education and had organized the machinery necessary to secure it. In March, 1924, the benefits of the vocational education act were extended to the Territory of Hawaii, and in February, 1929, further development of the movement was made possible by an increased appropriation.

Vocational education, as intended by the Smith-Hughes law and as interpreted by the Federal board, is education of lower than college grade, under public supervision and control, designed to meet the needs of persons over 14 years of age, the controlling purpose of which is to fit for useful employment.

Federal aid is designed to do two things—to furnish a fund to help pay the salaries of teachers of vocational subjects and of supervisors and directors of agricultural subjects, and to promote and assist the training of teachers in order to equip them to teach special subjects in the vocational field.

This Federal fund began in 1917 as an appropriation of \$500,000 “for the purpose of cooperating with the States in paying the salaries of teachers, supervisors or directors of agricultural subjects,” an equal amount “for the purpose of cooperating with the States in paying the salaries of teachers of trade, home economics and industrial subjects,” and a third appropriation of \$500,000 “for the purpose of cooperating with the States in preparing teachers, supervisors and directors of agricultural subjects, and teachers of trade and industrial and home economics subjects.” By the terms of the organic act, these appropriations increased progressively until 1926, when a maximum was reached which was to continue “annually thereafter.” This maximum was \$3,000,000 for agricultural education, \$3,000,000 for trade and industrial and home economics education, and \$1,000,000 for teacher training. However, the seventieth Congress passed a law, approved February 5, 1929, which amended the original act by increasing the maximum appropriation for agricultural and home economics education, and bringing about a partial separation of work in home economics from trade and industrial subjects. This law, “for the purpose of providing for the further development of vocational education,” appropriated an additional \$500,000 for the fiscal year ended June 30, 1930, and for “each year thereafter for four years a sum exceeding by \$500,000 the sum appropriated for each preceding year.” This amount is to be divided equally between agricultural education and home economics education. The law of 1929 also increased from \$200,000 to \$300,000 the appropriation given the Federal Board for

Vocational Education for the administration of the national vocational education acts.

The funds thus provided are allotted to the States quarterly on the basis of population as shown in the latest Federal census, on condition that the State, the local community, or both, raise an equal amount for the same purpose. The amount allowed each State for agricultural education is in proportion to the relation its rural population bears to the entire rural population of the country. A State's share of the fund for trade, industrial and home economics subjects is determined by the relation its urban population bears to the entire urban population, while teacher-training funds are prorated on the basis of total population. Federal money may be used only for part payment of salaries of teachers of vocational subjects, and such supervisors and directors as are specified in the law. No part of the Federal money or of the local money matching Federal money may be spent for buildings, maintenance, or equipment.

A State must perform certain definite acts to become and remain a beneficiary of the national vocational education law. It must (1) make formal acceptance of the terms of the act through its legislature; (2) appoint or designate a State board for vocational education; (3) submit plans, for the approval of the Federal board, outlining the program of the State board, showing the kind of vocational education proposed, equipment available, courses of study, methods of instruction, qualifications of teachers, and the teacher-training program; (4) report annually, through its board for vocational education, to the Federal board on the work done and the money expended under the act.

As already noted, within 10 months of the passage of the Smith-Hughes Act, all 48 States had signified their intention to cooperate in the movement, either through legislative enactment or executive order, and had set up the requisite machinery.

#### Federal Board for Vocational Education

THE organization of the Federal Board for Vocational Education coincided very closely with American entry into the World War, and the early history of the board was of necessity influenced by the current dislocation. Within a year of its organization it was given the responsibility of administering the law providing vocational rehabilitation for "disabled persons discharged from the military or naval forces of the United States." Before that task was transferred to the Veterans' Bureau, civilian vocational rehabilitation had been added to the duties of the Federal board.

The administration of Federal aid in civilian rehabilitation is still a function of the Federal board, but its machinery is so organized that the two distinct functions—vocational education and vocational rehabilitation—are carried on by separate divisions.

Both divisions are under the general direction of the executive staff, which is directly responsible to the members of the board. The executive staff consists of a director, an educational consultant, an editor, and a chief of the research and statistical service. The vocational education division is divided into four services, each under the direction of a chief. These are the trade and industrial education service, home economics education service, agricultural education service, and commercial education service. Geographically the coun-



try is divided into four regions, averaging 12 States each: North Atlantic, Southern, Central, and Pacific. Each of the services except the commercial education service maintains a field agent in each region. There are in addition special agents serving in a functional capacity and devoting their time to special problems rather than to regions. For example, a woman agent in the trade and industrial education service specializes in problems and opportunities particularly affecting women and girls; and a man in the agricultural education service gives his entire efforts to promoting the Negro agricultural schools of the South.

### State Boards for Vocational Education

THE national vocational education act requires that each State accepting its benefits "shall, through the legislative authority thereof, designate or create a State board, consisting of not less than three members, and having all necessary power to cooperate with the Federal Board for Vocational Education in the administration" of the act. The law further provides that the State board of education or any existing agency in control of public education in the State, may be designated as the State board for vocational education.

In thus permitting either the creation of a special board or the enlargement of the powers of the agency responsible for general education in a State, Congress in effect recognized the existence of a controversial problem and passed it on to the States to meet as they chose, at the same time taking a positive stand as far as Federal participation was concerned. This is the problem of "dual" or "unit" control in the administration of vocational education. Pioneer advocates and founders of vocational education wished to build the new system on an entirely new foundation, contending that the plan they had in mind could not develop properly under the guidance of the general educator, because vocational training would always be subordinated to formal schooling. They demanded, therefore, that the administrative machinery be placed altogether in the hands of those whose objective was adequate vocational training, entirely apart from prevailing academic methods. This theory has been vigorously opposed by school men, who have taken the position that the organized public-school system is the proper machinery through which to develop all phases of public education, and that a separation of vocational education and general education would result in undesirable class distinctions. Congress in effect aligned the Federal Government on the side of dual control, by establishing a separate board to carry out the Federal program for the promotion of vocational education, but at the same time it left the States entirely free to determine their own policy.

A diversity of forms of organization has been the result. In 33 States<sup>1</sup> the State board of education has been designated as the State board for vocational education. In most instances this has been done without special additional administrative organization beyond the appointment of a director of vocational education and perhaps of a supervisory staff.

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<sup>1</sup> Alabama, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, North Dakota, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming.

Several of the highly industrial States among these 33 have, however, developed divisions of vocational education within the department of education, which function practically independently in their field. This is especially true of Massachusetts, New Jersey, New York, and Pennsylvania. The organization in Massachusetts, for example, is that of a functional division, within the department of education, which is in control of all matters pertaining to the administration of State and federally aided vocational training. The director of the division is responsible to the commissioner of education and the advisory board, but he is the executive head of the division, the staff of which is responsible to him. The staff consists of supervisors in functional fields, coordinators, teacher trainers, and administrative assistants. In some States, on the other hand, one man serves in the dual capacity of administrative head and field supervisor of the various activities, including teacher training. In some cases, the official serving as director of vocational education is only a part-time employee.

Colorado designated its State board of agriculture as the State board for vocational education, and several other States<sup>2</sup> have delegated the authority of the State board to ex officio commissions, which employ administrators to carry out the State programs. Illinois illustrates this form of organization. Its State board for vocational education consists of the director of registration and education (who serves as chairman), the superintendent of public instruction (who is the executive officer with power to appoint), the director of trade and commerce, the director of labor, and the director of agriculture. The working staff is composed of a supervisor and assistant supervisor for each of the three sections, agriculture, trade and industry, and home economics, and an additional assistant supervisor for the trade and industry section. Teacher training is under the immediate direction of the board.

Seven States<sup>3</sup> have created special boards for vocational education separate from other administrative agencies. In most of these cases, however, the State commissioner of education or superintendent of public instruction is a member and is generally the executive officer. Other members frequently include the presidents of the State university and the State normal school, or other representatives of those institutions.

Wisconsin, carrying out a distinctive plan, has established its entire vocational-training system under the direction of State and local boards which are independent administrative bodies in complete control of vocational education, even to the extent of exercising power to levy taxes in its support. The membership of the State board consists of three employers, three employees, three farmers, and two State officials, ex officio. The ex officio members are the State superintendent of education and one of the State industrial commissioners. Community elements of employers, workers, and farmers are similarly represented on the local boards, of which the local school superintendent is also a member. The staff of the State organization consists of the State director of vocational education, an assistant director who is also State supervisor of trade and industrial

<sup>2</sup> Illinois, Iowa, Maine, Nebraska, New Hampshire, Ohio, and South Dakota.

<sup>3</sup> Georgia, Michigan, Mississippi, North Carolina, Oklahoma, Oregon, and Wisconsin.

education, an agricultural supervisor, a home economics supervisor, and a staff of teacher trainers consisting of one for each division of the work, under the immediate direction of a teacher-training supervisor.

A system of State aid for local programs of vocational education was in operation in eight States when the national movement was launched. These State systems worked in much the same way locally as the Federal system has done nationally. The States referred to, with the year in which they began State promotion of vocational education, are Massachusetts (1906), New York (1909), Wisconsin (1911), and Connecticut, Indiana, New Jersey, Pennsylvania, and Virginia (all in 1913).

#### State Plans

COOPERATIVE relations between the Federal and the State agency in the administration of vocational education have their foundation in the State plan, or program, which is submitted by each State to the Federal board for approval. This plan outlines the method by which the State proposes to conduct its federally aided vocational education activities and when approved, constitutes in effect a contract between the State and the Federal Government. At first, plans were drawn up and submitted annually. Beginning in 1922, however, a policy of establishing a 5-year program was adopted by most States. Necessary amendments or revision during the 5-year period may be made in the same manner as the original plan, that is, by action of the State board with the approval of the Federal board.

Each State creates and is responsible for its own plan. In the interest of uniformity, however, the Federal board issues an outline which is widely followed and which covers the mandatory features and the salient points involved in each educational service. These points include the degree and kind of State supervision, the qualifications and duties of supervisors; the kinds of schools and classes to be operated, showing minimum standards of plant and equipment and maintenance costs, course content, method of instruction and qualifications of teachers in each kind of school or class and for each of the three educational services—agricultural, trade and industry, and home economics.

Teacher-training programs for each of the three services are also included in the outline, showing the agencies to be used in preparing teachers, the occupational and related-subject requirements, courses of study and certification procedure for those preparing to teach vocational subjects, and special plans for improving the teaching technique of those already in active service.

While it would be manifestly impossible to attempt the adoption of a uniform plan applicable to all States, the Federal board has set up minimum standards which must be met before a State plan will be approved and aided. Any State may go as far beyond these minimum requirements as it desires. As a matter of fact, programs differ widely from State to State, even in relation to plans for which Federal aid is sought, and it must be emphasized that Federal jurisdiction over educational work within a State extends only to that phase of vocational education for which the State asks and accepts a Government subsidy. Disapproval of a State plan by the Federal board



"does not mean," the Federal board points out, "that the State may not adopt the plan, but only that it may not use Federal funds for reimbursement under the plan disapproved."

In the carrying out of the State plan, Federal jurisdiction is still further limited by the fact that the Federal Board for Vocational Education and its representatives in the field deal only with the State board for vocational education in each State. Except in the determination of the legal aspects of cooperation, Federal authority does not extend beyond withholding Federal money in any case of failure to live up to the agreement implied in the State plan.

The Federal board reserves the right, of course, to inspect from time to time schools and institutions in order to determine whether or not the State is carrying out properly the plan agreed upon. This relationship does not preclude the giving of advice to schools by the Federal board or its agents at the request of State boards or their agents.<sup>4</sup>

### Federally Aided Vocational Activities

THE organization and administration of federally aided vocational education is in all instances basically local. Federal subsidy for vocational training merely promotes that type of education; it does not in any way affect local control. It does, however, tend to improve the service in less progressive communities and States by maintaining minimum standards which must be met and adhered to before Federal aid is granted. These minimum standards are applied to plant and equipment as well as to course content and qualifications of teachers, despite the fact that the Federal Government makes no contribution to physical properties or their maintenance. The Federal Government, through the Federal board, "will hold State boards responsible for determining that the plant and equipment in the case of any school or class are, according to standards set up in approved State plans, adequate to carry out the purpose for which the school is established, and that the amount expended for maintenance is sufficient to insure practical realization of standards of work prescribed in State plans."<sup>5</sup>

The actual financial contribution of the Federal Government to vocational education is contingent upon the use of a dollar of State or local money for each dollar of Federal money appropriated, and is limited to the definite activities specified in the act. These activities, as enumerated by the Federal board, are:

1. Teaching or supervision of agricultural subjects.
2. Teaching of trade or industrial subjects in all-day schools.
3. Teaching of trade or industrial subjects in evening schools.
4. Teaching of trade or industrial subjects in part-time schools, including teaching of general continuation subjects in part-time schools.
5. Teaching of home-economics subjects in all-day schools.
6. Teaching of home-economics subjects in evening schools.
7. Teaching of home-economics subjects in part-time schools.
8. Preparation of agricultural teachers, directors or supervisors.
9. Preparation of trade or industrial teachers.
10. Preparation of home-economics teachers.

Moreover, all schools and classes seeking Federal aid must be under public supervision and control; the education they offer must be of

<sup>4</sup> Federal Board for Vocational Education, Bulletin No. 1 (rev. ed.), p. 11.

<sup>5</sup> *Idem*, p. 14.

less than college grade and suited to the educational objectives of persons over 14 years of age, and "the controlling purpose of such education shall be to fit for useful employment."

The national vocational education act specifies to some extent the provision that must be made for each of the three fields of training.

#### Provisions for Agricultural Education

THE only mandatory provision in the Smith-Hughes Act governing agricultural education is that schools shall "provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year." According to the Federal board's interpretation—

Directed practice is that practice which is done under specific direction of the supervisor. It implies the giving of definite directions by the supervisor and the carrying out of such directions by the pupil. Directed practice more commonly deals with operative training, and is a common form of practice by vocational pupils on school farms.

Supervised practice is that practice performed by the pupil more largely on his own responsibility and over which the supervisor exerts an influence and power of approval. It implies the working out of plans and the carrying out of such plans by the pupil under the general guidance of the supervisor. Supervised practice deals with both managerial and operative training, and is a common form of practice by vocational pupils on home farms.<sup>6</sup>

Four types of school organization have been developed to meet the needs of those interested in vocational agriculture and to carry out the intent of the law. These are the all-day school, the day-unit school, the part-time school and the evening school. The all-day school is composed of pupils of school age and is in fact a regular secondary school specializing in agriculture, giving not less than 90 minutes' instruction per day in agricultural subjects in addition to the required six months of directed or supervised practice. These schools may be organized as departments of agriculture in the high schools, or as separate schools. Separate agricultural schools usually have extensive equipment in the way of buildings, farm lands, animals, machinery, and the like, and as a rule have a fairly large corps of instructors who specialize in the various branches of agriculture. These schools as a whole teach scientific farming. Examples are the county schools of Massachusetts and Wisconsin, the district schools of Georgia, and the State schools of Minnesota and New York.

Day-unit schools or classes are sections of the regular schools, usually in isolated rural districts where the number of pupils is too small to support a full-time instructor. Pupils are organized into classes to receive a minimum of 90 minutes a week in technical agriculture from an itinerant instructor who also supervises their practical work. Practical work under this form of organization is usually done on the home farm.

Part-time schools or classes are operated for those who have left school and have entered upon farm work as a vocation. Instruction is given in short-unit courses in technical agriculture and related subjects, and the practical farm work of the pupils is supervised by the teacher.

Evening schools or classes are maintained for and attended by adult farmers who desire technical and scientific instruction to supple-

<sup>6</sup> Federal Board for Vocational Education, Bulletin No. 112, pp. 4, 5.

ment their practical knowledge and experience. Although called evening classes, they are in reality "free time" classes which may be held at any time most convenient for the majority of the students enrolled. Part-time and evening classes usually extend over periods of two hours twice a week.

Courses of study in vocational agriculture include not only practical and technical subjects and related science, but in most cases, particularly in the day schools, some instruction in farm mechanics and the care and upkeep of farm machinery.

The number, distribution, and enrollment of each of the four types of agricultural schools receiving Federal aid in 1930 are shown in the following table:

TABLE 1.—NUMBER AND ENROLLMENT OF EACH OF THE FOUR TYPES OF FEDERALLY AIDED SCHOOLS AND CLASSES TEACHING VOCATIONAL AGRICULTURE, FOR FISCAL YEAR ENDED JUNE 30, 1930, BY GEOGRAPHIC DIVISIONS

Region	All-day schools		Day-unit schools		Part-time schools		Evening schools	
	Num-ber	Enroll-ment	Num-ber	Enroll-ment	Num-ber	Enroll-ment	Num-ber	Enroll-ment
North Atlantic <sup>1</sup> .....	615	15, 290	151	2, 016	184	1, 884	152	3, 326
Southern <sup>2</sup> .....	1, 747	44, 802	498	7, 206	191	1, 952	1, 694	38, 431
Central <sup>3</sup> .....	1, 143	39, 424	37	763	34	1, 145	215	17, 605
Pacific <sup>4</sup> .....	406	14, 373	5	52	17	253	143	6, 336

<sup>1</sup> Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Rhode Island, Pennsylvania, Vermont, and West Virginia.

<sup>2</sup> Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

<sup>3</sup> Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin.

<sup>4</sup> Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Washington, Wyoming, and Hawaii.

Provisions for Trade and Industrial Education

THE Smith-Hughes law is quite explicit in setting forth what constitutes vocational education in trade and industry and in outlining the procedure necessary to qualify for Federal subsidy in carrying out a program of trade and industrial training. Six types of school have been organized to meet the educational requirements of the various groups of students. These are the evening industrial school, three forms of part-time schools or classes (trade preparatory, trade extension, and general continuation), the unit trade school, and the general industrial school. The law imposes certain conditions on each type.

The evening industrial school or class is open only to persons 16 years of age or over, and instruction therein is confined "to that which is supplemental to the daily employment" of the student body. Here again the expression "evening school" is a term in popular use which has in fact no literal significance, as classes are organized to coincide with the free time of the group.

An essential characteristic of the federally aided industrial class is that the instruction must relate directly to the occupations of the members and be supplemental to the daily employment. Hence, they may not be used as preparation for a trade or as a means of changing from one craft to another. A man who earns his living as a painter may not take up automobile mechanics in a federally aided



evening industrial school; a grocery clerk would not be admitted to a class of journeymen studying a skilled trade.

Instruction "supplemental to daily employment" may, however, cover either advanced occupational practice, or related subjects.

For instance, an evening industrial school for plumbers or plumbers' apprentices could \* \* \* give these men instruction in plumbing shop practice; in blueprint reading for plumbers; in State and local rules and regulations for plumbing installation; and in other allied subjects, all related to the plumbing trade.<sup>7</sup>

The grocery clerk excluded from the class in which journeymen were increasing their knowledge and improving their skill in a trade in which they were already engaged could, however, take up elementary instruction in a skilled trade or a higher-grade occupation in a part-time trade preparatory school. Schools and classes of this type are organized for persons between the ages of 14 and 18, who have entered upon employment, and are designed "to fit these persons for useful employment in a trade or industrial pursuit other than the one in which they are employed." In short, the objective is to afford a way out of the blind-alley job into which children drift when they leave school at 14 or 16. A minimum of 144 hours' instruction in these classes is mandatory under the law. This time is taken out of the working day of the employed pupils and is usually divided into four hours a week for 36 weeks. A certain amount of flexibility of distribution is permitted however, and classes may meet eight hours a week for 18 weeks. In special cases, the 144-hour trade preparatory course may be given intensively, six or eight hours a day for a few weeks, on the "vestibule school" plan.

The part-time trade-extension school is essentially the same type of organization as the part-time trade preparatory school and is maintained for the same age groups, that is, 14 to 18 years of age. The difference lies in the fact that trade-extension courses are designed to amplify the training of the employed minor, in the trade or industrial pursuit in which he is employed. Attendance upon these classes is four or eight hours a week, during the working day.

One of the most valuable types of work which is ordinarily carried on in city trade schools is of this type. This special form of part-time organization lends itself exceedingly well to apprentice-training programs and more especially for advanced apprentices. Very often attendance upon such schools or classes is required under cooperative agreements between labor organizations and employers and the schools or apprentice commissions and the school.<sup>8</sup>

When well-equipped trade schools are not available, instruction in technical and related work may be given the trainees through a modification of the trade-school plan.

Classes may meet at any convenient point, as, for example, in a private establishment where an instructor whose salary is paid from public funds meets his groups of apprentices at stated intervals. This type of school has been successfully operated in groups of cities, with the instructor spending one day in each of several cities. In this way it is possible for a special instructor of plumbers' apprentices, for example, to carry on organized instruction with groups of apprentices in as many as five cities in a State, while another instructor carries on a similar program with groups of apprentices from the painting and interior-decorating trade, and a third instructor serves the iron molders' trade in a similar manner.

<sup>7</sup> Federal Board for Vocational Education, Bulletin No. 19 (2d rev. ed.), p. 20.

One particular advantage of this type of organization is that no large central trade school is necessary and the program can be worked out where none of the cities served would be able to support a comprehensive unit trade school offering instruction in a wide variety of trades.<sup>8</sup>

Dull seasons may be utilized by organizing daily classes for intensive work in school for six or eight hours a day.

Another development of the part-time trade extension school is the cooperative course, in which the student worker divides his time equally between his job and his school work. Under this plan the trainees generally work in pairs, and while one member of the pair is in school the other is at work, and their positions are reversed at the close of the period which is, as a rule, one week or two weeks.

The third form of part-time school is the general continuation school, which is organized "for the purpose of giving instruction of less than college grade to persons over 14 who have entered upon employment, which instruction shall be given in subjects to enlarge the civic or vocational intelligence of young workers."

In view of the fact that the enrollment in such a school may be expected, especially where attendance is compulsory by law, to include young workers from a great variety of occupations, the principal educational objectives are: (1) Employment adjustment, (2) vocational and educational guidance, and (3) social adjustment.

Special classes for office and store workers may be established in a part-time continuation school.

Very often the term continuation school is used in the generic sense in designating part-time schools generally. Excellent examples of trade-extension and trade-preparatory part-time classes for specially selected groups are often found in part-time schools commonly referred to as general continuation schools.<sup>9</sup>

Generally speaking, however, continuation schools, especially where they are part of the compulsory school system, have scant vocational significance. Rather they tend to carry on, during the brief four or eight hours a week of compulsory attendance, the formal academic work of the regular schools.

Part-time schools of all three types are given particular emphasis in the Smith-Hughes law in the provision that "at least one-third of the sum appropriated to any State for the salaries of teachers of trade, home economics, and industrial subjects shall, if expended, be applied to part-time schools or classes." A "part-time" school or class is one which is in session during the working time of its pupils, but working time may be considered in terms of working day, week, month, or year if the required minimum of 144 clock hours of class instruction a year is met. The subject matter which may be given in federally aided part-time schools is not outlined in the law, and may be "any subject given to enlarge the civic or vocational intelligence" of employed minors between 14 and 18 years of age. By a ruling of the Federal board, States are authorized to use Federal money for part payment of the salary of coordinators to provide proper cooperation between school work and daily employment. The Federal board defines a coordinator as "the person who supervises or correlates the class instruction and the practical experience of part-time students."

The duties of such coordinators shall include those of informing parents and employers of the importance and value of the part-time school and securing their

<sup>8</sup> Federal Board for Vocational Education, Bulletin No. 17, p. 49.

<sup>9</sup> *Idem*, p. 21.

active support and cooperation, of studying industrial conditions and occupations, of eliminating friction in the adjustment of hours of schooling and employment, of assisting in the placement of pupils temporarily out of work or in transferring them from undesirable to better jobs, of following up the pupils in their out-of-school activities, and of consulting with teachers and supervisor or director as to changes in the school program, instructional matter, etc.<sup>10</sup>

The unit trade school is an all-day school maintained for persons over 14 years of age who have not yet entered employment, the objective of which is "to prepare individuals for advantageous entrance with advanced standing into various stages of employment." Under the Smith-Hughes law these schools must be in session 30 hours a week for 9 months in the year, and "shall require that at least half the time of such instruction be given to practical work on a useful or productive basis."

Trade schools have developed along two lines—the trade department of the regular high school, and the separate trade school. Of the first plan the Federal board says: "In most cases this special form of trade school operates under a severe handicap" and the very real problems connected with it "tend to make it difficult, if not impossible, to operate an efficient unit trade course in connection with an ordinary high school." Among these problems are the requirement of 30 hours a week, half of which must be given to manipulative work "on a useful or productive basis."

The separate trade school is usually established as part of a city school system and "in many cases it is neither an elementary school nor a high school." Consolidated trade schools have developed to some extent, using the county as the unit of administration.

In Connecticut the trade schools are a State institution. There are 11 such schools, located mostly in the larger industrial cities. Local communities provide the building, and the schools are equipped and operated by the division of vocational education of the State department of education. "Under the Connecticut plan any trade school in the State is a public school for any boy in the State."

North Dakota has carried consolidation to the point of establishing one trade school for the entire State. This is the State School of Science, at Wahpeton, and, according to the Federal board, "it has been found possible to carry on a highly efficient program of trade and industrial education in this school, largely under the dull-season plan."

The general industrial school is a unit trade school adapted to meet the needs of cities and towns of less than 25,000 population. It is organized and operated on the same basis as the city trade schools, and while the same legal requirements of hours and course content which apply to the larger unit cover the general industrial school also, they may, under the law, be so modified by the State board for vocational education, with the approval of the Federal board, as to conform more closely to local conditions. One method of adjusting to community conditions is to allow a boy to take elementary training in more than one trade in order to increase his opportunities for employment in a community in which openings are limited.

The number of federally aided trade and industrial schools and classes of all types was 2,352 in the fiscal year ended June 30, 1930, and their total enrollment was 422,575 males and 196,099 females. Trades, occupations and technical subjects taught numbered 225.

<sup>10</sup> Federal Board for Vocational Education, Bulletin No. 1, p. 44.



Details of distribution, enrollment and Federal expenditure for the different types of trade schools and classes in the various States in 1930 are shown in Table 2:

TABLE 2.—NUMBER OF SCHOOLS, NUMBER OF PUPILS ENROLLED, AND AMOUNT OF FEDERAL MONEY EXPENDED IN 1930, IN EACH TYPE OF TRADE AND INDUSTRIAL SCHOOL, BY STATES

State	Type of school					Number of pupils enrolled in—							
	Total	Evening	Part-time		All day	Evening schools		Part-time schools					
			Trade extension	General continuation		Male	Female	Trade extension		General continuation			
								Male	Female	Male	Female		
Alabama.....	74	53	4	7	10	2,670	23	83			82	82	
Arizona.....	6	2		1	3	302	55				177	782	
Arkansas.....	17	4	3	4	6	272	27	33	60	34	175		
California.....	116	20	31	31	34	9,349	1,363	4,320	2,306	13,170	11,575		
Colorado.....	41	28	5	2	6	6,588		469	452	168	280		
Connecticut.....	29	11	7		11	1,988		530					
Delaware.....	9	5	1	3		605	64	38		501	372		
Florida.....	30	17	1	8	4	1,230	1	174		632	644		
Georgia.....	65	36	5	11	13	2,553	711	34	291	405	1,588		
Idaho.....	12	8	2		2	995	15	36	192				
Illinois.....	63	26	9	14	14	6,135		3,305	7	7,738	6,139		
Indiana.....	47	20	7	2	18	4,724	49	1,039	477	26	178		
Iowa.....	42	23	8	11	10	1,300	351	234	296	480	508		
Kansas.....	34	25	1	1	7	4,454	290	32		8	37		
Kentucky.....	58	50	1	3	4	1,618		43	65	8			
Louisiana.....	8	3	3		2	2,607	782	295	275				
Maine.....	10	6	3		1	378	30	78					
Maryland.....	30	11	4	7	8	1,551	231	38	16	136	248		
Massachusetts.....	91	18	11	32	30	5,635		935		10,900	11,586		
Michigan.....	77	18	20	23	16	12,485	25	4,593	70	3,360	5,664		
Minnesota.....	16	7	1	3	5	214	113	354	318	608	271		
Mississippi.....	38	6	4	35	3	288	40		87	338	585		
Missouri.....	45	20	4	5	16	1,959	246	392	246	4,173	3,148		
Montana.....	10	6	2		2	235		58					
Nebraska.....	40	34	2	1	3	1,581	1,450	81		31	57		
Nevada.....	16	10	1		5	318		27					
New Hampshire.....	5				5								
New Jersey.....	84	24	3	42	15	7,255	19	451		7,307	9,393		
New Mexico.....	5	3	1		1	800	4		8				
New York.....	127	38		64	25	15,922	1,580			86,054	75,147		
North Carolina.....	113	73	3	35	2	4,294	510	4	296	227	493		
North Dakota.....	5	2	2		1	36		258					
Ohio.....	200	92	49	34	25	10,926	193	3,012	865	3,121	3,082		
Oklahoma.....	40	14	11	9	6	2,752	294		598	2,181	785		
Oregon.....	22	11	5	1	5	1,162	78	257	162	60	67		
Pennsylvania.....	232	58	22	108	44	8,556	201	982	25	18,592	26,542		
Rhode Island.....	10	5	2		3	1,065		571	208				
South Carolina.....	62	45	10		7	3,839	45	396	92				
South Dakota.....	7	2	1		4	206		89					
Tennessee.....	52	33	6	10	3	2,258	259	72	150	385	1,484		
Texas.....	101	42	26	19	14	3,566	460	563	935	386	625		
Utah.....	22	6	16			237		980	637				
Vermont.....	6	1	4		1	149	19	182					
Virginia.....	42	24	2	6	10	1,711	179	1,503		131	112		
Washington.....	19	6	1	3	9	1,500		100		1,960	1,225		
West Virginia.....	19	14	1	3	1	1,522	8	89		6	43		
Wisconsin.....	100	34	26	34	6	13,632	174	10,703	407	4,376	3,871		
Wyoming.....	22	16	1	1	4	2,008		64	219				
Hawaii.....	13	3	3		7	55	13	18	74				

TABLE 2.—NUMBER OF SCHOOLS, NUMBER OF PUPILS ENROLLED, AND AMOUNT OF FEDERAL MONEY EXPENDED IN 1930 IN EACH TYPE OF TRADE AND INDUSTRIAL SCHOOL, BY STATES—Continued.

State	Number of pupils enrolled in—		Amount of Federal expenditure for—				
	All-day schools		Evening schools	Part-time schools		All-day schools	Total
	Male	Female		Trade extension	General continuation		
Alabama.....	358	-----	\$11,647.29	\$1,582.74	\$2,063.55	\$7,261.97	\$22,555.55
Arizona.....	17	-----	1,648.50	-----	3,707.00	2,644.50	8,000.00
Arkansas.....	173	35	967.75	-----	-----	5,868.55	6,836.30
California.....	5,533	647	7,963.98	23,292.71	12,720.00	59,906.66	103,883.35
Colorado.....	148	-----	7,253.75	11,413.34	367.37	1,159.16	20,193.62
Connecticut.....	2,580	91	5,214.48	8,638.92	-----	19,119.76	32,973.16
Delaware.....	-----	-----	1,777.50	97.00	8,125.50	-----	10,000.00
Florida.....	301	-----	3,353.80	658.05	7,912.60	3,925.21	15,849.66
Georgia.....	755	386	12,310.49	3,998.50	12,614.91	7,503.72	36,427.62
Idaho.....	26	-----	2,481.50	2,059.65	-----	1,973.58	6,514.73
Illinois.....	1,877	-----	12,463.86	38,062.28	98,939.76	46,816.16	196,282.06
Indiana.....	6,107	58	5,413.34	24,730.16	1,216.28	34,704.48	66,064.26
Iowa.....	780	-----	3,487.45	6,665.27	16,775.29	12,077.10	39,005.11
Kansas.....	408	12	8,112.14	1,400.00	250.00	11,450.00	21,212.14
Kentucky.....	692	135	3,101.48	-----	-----	14,283.48	17,384.96
Louisiana.....	418	423	5,274.32	10,338.49	-----	11,050.83	26,663.64
Maine.....	22	-----	2,593.00	3,483.22	-----	1,766.59	7,842.81
Maryland.....	924	301	10,134.50	4,208.33	2,985.25	12,460.65	29,788.73
Massachusetts.....	6,885	1,273	5,206.02	6,248.65	58,493.88	84,992.54	154,941.09
Michigan.....	1,474	379	14,768.00	31,012.67	24,605.33	29,624.00	100,010.00
Minnesota.....	2,423	296	513.25	12,458.75	11,909.50	31,492.67	56,374.17
Mississippi.....	109	-----	1,277.78	222.34	10,997.24	875.00	13,372.36
Missouri.....	1,504	317	7,928.77	4,656.38	22,021.80	33,308.95	67,915.90
Montana.....	72	-----	684.00	448.00	-----	1,625.00	2,757.00
Nebraska.....	153	-----	8,074.60	890.50	1,258.35	4,763.64	14,987.09
Nevada.....	114	-----	1,797.50	630.00	-----	2,668.74	5,096.24
New Hampshire.....	282	-----	-----	-----	-----	10,386.61	10,386.61
New Jersey.....	4,380	433	36,259.50	3,958.63	41,984.50	27,790.88	109,993.51
New Mexico.....	22	2	1,947.00	250.00	-----	2,306.00	4,503.00
New York.....	10,160	3,454	58,737.67	-----	218,736.81	200,894.63	478,369.11
North Carolina.....	63	-----	11,197.49	3,459.00	9,114.75	1,225.00	24,996.24
North Dakota.....	115	-----	145.00	4,243.60	-----	3,611.40	8,000.00
Ohio.....	2,260	221	17,104.93	50,612.39	44,287.10	51,819.57	163,823.99
Oklahoma.....	257	7	4,375.75	4,810.37	12,760.98	25,060.72	47,007.82
Oregon.....	187	-----	1,613.85	9,211.86	905.00	5,690.00	17,420.71
Pennsylvania.....	6,079	958	33,861.84	18,939.82	94,471.83	119,512.61	266,786.10
Rhode Island.....	171	-----	3,991.12	17,956.42	-----	7,550.99	29,498.53
South Carolina.....	482	-----	7,948.16	-----	5,483.00	2,941.00	16,372.16
South Dakota.....	57	-----	369.00	1,488.84	-----	2,031.25	3,889.09
Tennessee.....	257	10	7,902.75	2,977.50	10,882.93	6,145.65	27,908.83
Texas.....	815	33	12,442.50	24,525.97	7,442.01	18,522.05	62,932.53
Utah.....	-----	-----	1,020.75	-----	8,583.97	-----	9,604.72
Vermont.....	18	-----	1,300.00	5,550.00	-----	1,800.00	8,650.00
Virginia.....	1,290	46	5,793.63	8,873.65	3,637.76	11,722.34	30,027.38
Washington.....	297	4	5,883.00	1,140.00	17,462.85	10,046.10	34,531.95
West Virginia.....	94	-----	4,374.59	5,491.74	734.25	5,000.00	15,600.58
Wisconsin.....	297	-----	18,843.75	24,170.81	12,433.52	-----	55,448.08
Wyoming.....	83	-----	2,716.66	723.75	168.00	1,950.00	5,558.41
Hawaii.....	295	54	462.00	1,394.00	-----	4,871.34	6,727.34

## Provisions for Home Economics Education

ALL of the provisions and requirements of the Smith-Hughes law dealing with trade and industrial education apply equally to home economics education, the expression used throughout the law being "trade, home economics, and industrial education." Administra-

tively, however, the home economics service has been separated from trade and industrial education and made a distinct movement. Not more than 20 per cent of the Federal funds allotted to a State may be expended on home economics education, and one-third of the amount expended must be devoted to part-time classes.

However, from a labor viewpoint, home economics education as interpreted and carried out by the vocational education boards of the States and the Federal Government is an educational movement rather than a vocational one. This is because training for employment in definite wage-earning occupations connected with the home is classed as trade and industrial education and included in the work in that field. The Federal board states the distinction thus:

Wherever instruction has for its end the further preparation of a woman for her duties as a home maker or as a household assistant this instruction belongs in the field of home economics and would be subsidized from that portion of the fund. When, however, the instruction prepares or further fits a person to earn a livelihood in some special occupation, such as nursing, cooking, or dressmaking, it has been held to be trade or industrial instruction and would be subsidized from the trade and industrial portion of the fund.<sup>11</sup>

### Supervision and Teacher Training

AMONG the methods intended by the national vocational education act and employed by the Federal board to promote vocational education throughout the country, provisions for supervision and teacher training are of chief importance. The fund of \$1,000,000 appropriated for teacher training is distributed to the States on the basis of total population, and the use of the State's share is regulated by the provision that not more than 60 per cent nor less than 20 per cent shall be used in training teachers for any one of the three divisions of vocational education. Moreover, a State must take advantage of "at least the minimum amount appropriated for the training of teachers" in order to be eligible to the other benefits conferred by the act. In agricultural education supervisors are included with teachers in the training program.

The Smith-Hughes law requires that all organized teacher training shall be conducted under the supervision of the State board for vocational education, and that all educational institutions seeking reimbursement from Federal funds for teacher training must be under public supervision and control. State programs for training vocational teachers are, as a rule, carried out by the State university or the land-grant college of the State. Probably the most successful medium is that of extension and correspondence courses conducted by the State educational institutions, which may be utilized by the teacher in active service as well as the preemployment trainee.

States make their own requirements for qualification and certification of teachers, but these requirements must meet the approval of the Federal Board for Vocational Education and conform to the minimum standards which it imposes. These standards include a stated number of years' actual experience in the vocation which a person intends to teach or to supervise.

In some States advisory committees made up of employers and employees in specific industries or occupations have been estab-

<sup>11</sup> Federal Board for Vocational Education, Bulletin No. 28, p. 34.



lished in connection with the program of training teachers for those fields.

### Foreman Training

A DISTINCT phase of the trade and industrial teacher-training program which the Federal Board for Vocational Education has been developing is the training of foremen and of leaders for foreman conferences. The Federal board has ruled that foremanship classes, the objective of which is the improvement of foremen in the discharge of their responsibilities, may be considered evening schools and reimbursed from Federal funds. As a corollary, it has also ruled that the training of teachers to conduct foremanship classes is a legitimate part of a State teacher-training program. The method of procedure is the holding of regional or industrial conferences of foremen, at the request or with the cooperation of the State board for vocational education, and of the industries or manufacturing plants concerned. The primary aim of these conferences is the development of leaders qualified to work with foremen and to carry out foreman-training programs. The annual report of the Federal board for 1930 shows that special conferences to further the development of foreman training in cooperation with industry were held during 1930 in Kansas, Michigan, Oklahoma, Pennsylvania, and Texas, at the request of those States. In that connection it is pointed out that—

Experience has shown that in proportion as State boards for vocational education, local boards of education, educational institutions, and industrial organizations have developed foreman conference programs, direct assistance from the Federal board in conducting foreman conference work has been of decreasing importance. Concurrently with the decreased demand for assistance in this field there has been an increased need for assistance in the training of special instructors, or foreman conference leaders, to carry on the detailed work of foremanship training.<sup>12</sup>

### Research

STUDIES, investigation, and research in the field of vocational education and of the means of promoting it are explicitly directed by the Smith-Hughes law as an administrative measure. Research work on a national scale may be done either by the Federal board directly, or for it on a cooperative basis by the Federal department having jurisdiction over the special field involved. Thus studies concerning trades and industries, for example, undertaken in the interest of trade and industrial education, "may be made in cooperation with or through the Department of Labor." Investigations involving the work of a State, or applying only to a given State, are undertaken as a rule only at the request of that State.

Much of the research work and the published material of the Federal board deals with administrative matters and teaching methods. However, the field staff of the board has made numerous industrial surveys in the various States preliminary to inaugurating programs, and has done a large amount of work in occupational studies such as job analyses and analyses of agricultural enterprises as a basis upon which to plan courses of study. This work is generally done by the field agents in addition to their regular duties as Federal representatives.

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<sup>12</sup> Federal Board for Vocational Education, Bulletin No. 127, p. 4.

In the field of commercial education, the only contribution which the Federal Government makes is in research studies and assistance on the promotional side. Commercial education is not directly supported by Federal money. That form of vocational training is, however, included in the programs of several States, and the Federal board has developed a unit within its staff which is active not only in conducting needed research, but in giving service and advice in the establishment and operation of commercial courses and in conference work with State officials and teachers of commercial subjects. A current study covers job analysis and terminology of the numerous and varied occupations in ordinary commercial employment.

### Other Federal Activities

RESPONSIBILITY for the administration of vocational education lies with the local agency which is carrying out, locally, the State program. Responsibility for seeing that the program is being carried out by each local unit lies with the State board for vocational education, through its director and supervisors. The work of the State board is then supervised by the Federal board, through its field agents, to insure the observance of the detailed provisions of the Federal law. While the inspectional work of the Federal agents is carried into the individual schools, official relations are had only with the State boards.

Oversight of State work by Federal representatives includes an audit of the accounts in so far as they involve Federal money.

One way of promoting and encouraging vocational education which is systematically used by Federal field agents is the holding of regional conferences. These are arranged to give all persons, associated with or interested in the movement, opportunity to attend and to take part in the interchange of experiences and the development of new ideas and new methods.

### State Participation

THE extent of Federal activity in vocational education tells only a part of the story. It has already been brought out that Federal money is available only when it is matched by an equal amount of money contributed by the State, the community, or both. In all but a few States the contribution of the local units and the State is far in excess of the amount of Federal money to which the State is entitled under the distribution provided in the Smith-Hughes law.

For the year 1925-26, the ratio of State and local funds per Federal dollar expended was \$2.54; for 1926-27, \$2.65; for 1927-28, \$2.77, and for the year 1928-29, \$2.99. The steady increase in this ratio indicates that the States and local communities are sufficiently interested in the development of vocational education to expend far more than is required for the type of vocational schools and classes which conform to the standards of approved State plans. The ratio of \$2.99 of State and local money for each dollar of Federal money used for the salaries of teachers is the average for all of the States, including the Territory of Hawaii, for the fiscal year 1929. The ratio varies from \$7.57 for Massachusetts to slightly more than \$1 for a few of the smaller and less populous States.<sup>13</sup>

For the fiscal year ended June 30, 1930, the expenditure of State and local money for each dollar of Federal money in each branch of vocational education was: Agriculture, \$1.76; trade and industry, \$4.69; home economics, \$5.47; teacher training, \$1.35.

<sup>13</sup> Federal Board for Vocational Education, thirteenth annual report, Washington, 1929, p. 6.

A majority of the States grant State aid to local communities in support of vocational education under a system practically the same as that applying to Federal aid to the States. Allocation of Federal money within the State, and its distribution to the various branches and the different school organizations are entirely within the province of the State agency controlling vocational education.

That the extent of vocational education in schools which are receiving State aid, but not Federal aid, is considerable is shown by Table 3, which, however does not include data for Massachusetts:

TABLE 3.—ENROLLMENT IN STATE-AIDED VOCATIONAL SCHOOLS AND CLASSES, ORGANIZED UNDER APPROVED STATE PLANS BUT NOT REIMBURSED FROM FEDERAL FUNDS, BY STATES, YEAR ENDED JUNE 30, 1930<sup>1</sup>

State	Enrollment in nonfederally aided vocational schools and classes										
	Total	Agricultural schools			Trade and industrial schools				Home economics schools		
		Evening	Part-time	All day	Evening	Part-time		All day	Evening	Part-time	All day
						Trade extension	General continuation				
Alabama.....	362			39	323						
Arizona.....	3, 528			21	1, 307	63		46	1, 255		836
Arkansas.....	4, 066			534					18		3, 514
Colorado.....	35	35									
Georgia.....	4, 069				70				992		3, 007
Idaho.....	29				29						
Indiana.....	1, 429	1, 279			13	106		31			
Kansas.....	3, 979	549			323				3, 107		
Mississippi.....	3, 480								393		3, 087
Montana.....	634								634		
Nebraska.....	88										88
New Jersey.....	2, 872				1, 357	13	198	380	924		
New York.....	14, 122							5, 260			8, 862
North Carolina.....	10, 331	134		208							9, 989
Oklahoma.....	825								763		62
South Carolina.....	11, 500										11, 500
South Dakota.....	1, 259										1, 259
Texas.....	47				47						
Utah.....	20	20									
Virginia.....	2, 513										2, 513
Wisconsin.....	17, 466	1, 473	722		2, 919	62		2, 002	377	9, 816	95
Total.....	82, 654	3, 490	722	802	6, 388	244	198	7, 719	8, 463	9, 816	44, 812

<sup>1</sup> Federal Board for Vocational Education, fourteenth annual report, 1930, p. 87.

Massachusetts and Wisconsin are outstanding examples of community development of vocational education with the aid of State money and regulation. While Federal money is used in both States, it is applied chiefly to the organization of new programs and the establishment of new classes, rather than to the maintenance and development of those already operating. In Wisconsin representatives of employers and workers comprise the local boards of vocational education, and in Massachusetts advisory committees "composed of members representing local trades, industries, and occupations" are appointed by the board of trustees of the school.

The division of vocational education of the Massachusetts Department of Education fixes the qualifications for teachers of vocational



subjects, and the eligibility of pupils for admission to vocational schools. The State agency, however, does not select or appoint the teachers or fix their salaries. That is the prerogative of the local board of trustees. Beyond establishing uniform standards and a few compulsory subjects, the State board does not dictate courses of study. It does require, however, that all courses and methods of instruction shall be submitted for its approval. Standardized forms for records and reports are supplied by the State for use in all State-aided schools.

Vocational schools in Wisconsin are under the control of local boards independent of the general school administration. There are 47 city vocational schools in the State, each giving part-time and evening instruction. A director responsible to the local board for vocational education is in charge of each one. Many of them are housed in modern well-equipped buildings which have been erected for the special purpose. In some cases old high-school buildings have been taken over for vocational use as new high schools have been built. The Milwaukee Vocational School, located in the center of the city, "is the largest building in the world built primarily for the accommodation of wage-earning pupils whose schooling must be secured on a part-time basis."<sup>14</sup> Its shops are thoroughly equipped and represent practically every trade practiced in the city. In addition to vocational training, the school offers vocational guidance and placement, and maintains a teacher-training department which is assisted by State funds.

The administrative unit for vocational education in New Jersey is the county, and the controlling medium is an independent board whose authority includes the power to levy taxes in support of the vocational schools. Essex County, in which Newark, New Jersey's metropolis, is located, has a particularly active organization and a well-developed system of industrial training, while Atlantic County, an agricultural area, is centering its efforts on vocational agriculture.

#### Comparative Cost of Vocational Education

ADDRESSING the Senate recently on the subject of vocational education, Senator Sheppard of Texas made this statement:

In 1926, the last year for which the United States Bureau of Education has complete data, there was expended in the United States, including part of the Philippines and Hawaii, for all kinds of education—elementary, high school, and college—more than \$3,000,000,000. Of this total there was expended for vocational education by Federal, State, and local governments \$23,181,700, or just a fraction less than nine-tenths of 1 per cent of the whole. Stated in other terms this means an expenditure of only \$1 for vocational education for each \$100 expended for education of all kinds.<sup>15</sup>

Statistics reported by the Federal Board for Vocational Education for the fiscal year ended June 30, 1930, show an aggregate expenditure of Federal, State, and local money for vocational education of \$29,909,295, divided thus: Local, \$14,271,924; State, \$8,233,148; Federal, \$7,404,223. The enrollment for the year in federally aided and nonfederally aided vocational schools, as reported to the Federal board, was 443,283 females and 621,020 males, a total of 1,064,303. The number of teachers employed in federally aided schools was 24,876, of whom 17,222 were men and 7,654 were women.

<sup>14</sup> Wisconsin. State Board of Vocational Education. Bulletin No. 13, p. 42.

<sup>15</sup> Vocational Education in the United States, presented by Mr. Sheppard. Washington, 1931. (S. Doc. No. 309, 71st Cong., 3d sess.)

## Unemployment Insurance in Switzerland <sup>1</sup>

### Federal System

SWITZERLAND has been experimenting for many years in connection with matters relating to unemployment. The first endeavors to provide useful measures against unemployment in Switzerland are believed to have originated in 1884. At that time several workers' organizations created, in favor of their members, unemployment insurance funds which were known locally as "caisses d'assurance chômage." These funds, which were regulated by by-laws without supervision on the part of the State, had as their only resources the assessments of the insured. Neither the Confederation nor the Cantons were interested in such measures until a later date.

In 1893 the city of Berne created a communal fund. This was followed two years later by the formation of a similar organization at St. Gall. The experiments were not successful, largely by reason of defective organization and ineffective control, but they served to draw attention to the problem of insurance against unemployment.

Later the Federal Government endeavored to adopt measures having as their object relief against unemployment and ensuing circumstances. These measures took the form of the establishment of an employment bureau which was organized upon the basis of insurance against unemployment. The first step was the promulgation of the Federal decree of October 29, 1909, under the terms of which the Confederation granted subsidies to employment offices complying with certain conditions. In this way the decree contributed to making uniform and centralizing the public service for employment.

The solution of the problem of insurance against unemployment was delayed by the proposed elaboration of insurance measures against sickness and accidents, and also by the World War, but the subject came up for more serious consideration immediately following the war, when the economic situation in most countries of Europe was in chaos and unemployment was rife. The first steps by the Swiss Government were taken in August, 1918, and the first measures to relieve industrial unemployment were supported by both cantonal and Federal authorities. The most common means of aid was legislation authorizing the construction of public works, but an inevitable concomitant was the raising of construction costs to extraordinary heights and the certainty that not all of the deserving idle were really being aided by the expenditure of huge public funds.

The expenses involved were met by contributions by the Confederation, Cantons, communes, and employers. By the end of 1924 the cost had amounted to approximately 515,000,000 Swiss francs (\$99,395,000),<sup>2</sup> the Confederation contributing 296,000,000 francs (\$57,128,000) thereof, the Cantons and communes 201,000,000 francs (\$38,793,000), and private employers 18,000,000 francs (\$3,474,000).

It soon became apparent to the Swiss authorities that this system of assistance should be discontinued and it was proposed to replace it, as soon as the abnormal conditions resulting from the war had disappeared, by insurance against unemployment. It was believed

<sup>1</sup> Report prepared by Hugh F. Ramsay, American vice consul at Zurich.

<sup>2</sup> Conversions into United States currency on the basis of Swiss franc at par=19.3 cents.

that such insurance would have the advantage of safeguarding the dignity of the employee by permitting him to contribute, during periods of employment, toward the benefits to be received during idleness. Furthermore, it was demonstrated that abuses are more frequent under a system of assistance than under a system in which the workers participate.

The conviction that an unemployment insurance system was the best way of gathering a surplus fund to aid unemployment in times of crisis became sufficiently strong in 1924 to result in the abandonment of the extraordinary measures of relief in June of that year, and on October 17, 1924, the Federal law setting up regulations for an unemployment insurance system on a permanent basis became effective.

### Basis of System

SWITZERLAND is a federated State, consisting of 25 Cantons, each of which has the right to legislate upon all questions which have not been expressly reserved to the Confederation. The various Cantons therefore were permitted much latitude in the framing of regulations for the carrying out of the insurance plans. The chief features of the Federal law were the conditions to be fulfilled by the insurance companies, insurance funds, or mutual funds, in order to obtain Federal subsidy. The Federal law, for instance, did not prescribe minimum or maximum age limits between which insurance must be carried, nor did it specify by classes those persons who might be required to insure themselves. These and a number of other questions were left to the cantonal legislatures for regulation. As a consequence, while most of the Cantons have made unemployment insurance compulsory for factory workers, insurance for nearly all other classes of labor is voluntary, and in a few of the Cantons no worker is compelled to carry the insurance. Through the system of subsidies only, the Confederation avoided the establishment of a costly system of administration, while permitting existing funds the opportunity to develop without unnecessary expense.

### Essential Features of Law

THE subsidies provided by the law are granted only to funds devoting themselves solely to insurance against unemployment, and which keep separate accounts and provide guaranties that their funds are employed in a proper manner. The by-laws of the funds must prescribe exact rules governing contributions of the insured and payments on the part of the organization. No minimum is fixed for the benefit, but it must not exceed 60 per cent of the wages lost, insured members with family obligations receiving 10 per cent more than those without such obligation. The benefit may be paid only to those who are without work through no fault of their own and who have been unable to find employment. The insured must produce a statement from his last employer establishing the cause of his discharge, and must, in addition, register at the public employment exchange. In the case of certain trades the insured may register at a private employment office specializing in furnishing work for his trade. Benefits are payable only to those who have been members of a fund for at least 180 days and who have paid their contributions without interruption, and are payable at the earliest three days after registration at the labor exchange.



When unemployment is the result of a strike no benefit may be paid during the period of the strike and for at least 30 days thereafter. Benefits are payable not to exceed 90 days in any 360 days; in times of extraordinary depression, however, the Federal Council may extend this period. The law also requires that the by-laws of the funds shall provide for the withdrawal or refusal of payments to any unemployed individual who will not avail himself of any suitable offer of work, or who may attempt to obtain benefits fraudulently. Finally, the question of partial unemployment is treated, permitting payments of benefits under certain conditions.

The Federal subsidy is fixed according to the amount of the daily benefits paid by funds to members who qualify for relief, and amounts to 40 per cent of the benefit paid by public funds and similar organizations and to 30 per cent for all others. The Federal Assembly may temporarily increase the foregoing rates by 10 per cent at the maximum. The subsidy is paid to the funds only after verification of their annual accounts. Officials of the Federal Bureau of Labor have supervision over the funds and are vested with the right to examine the accounts of all funds, public or private, at any time.

Certain other provisions of the law relate to the free transfer of membership from fund to fund and fix a minimum of 200 members for those funds which are to receive Federal aid.

By law, foreigners domiciled in Switzerland are placed upon the same legal basis as Swiss citizens. However, under the unemployment insurance law, the Federal Council may deny or lower the subsidy paid to foreigners from a State which does not accord similar treatment to unemployed people of Swiss nationality, or which does not provide equivalent measures against unemployment. Any convention concluded by Switzerland with any other State, according to the terms of which the nationals of both States are to receive insurance against unemployment, are obligatory upon all recognized funds.

#### Cooperation of the Cantons

Soon after the passage of the Federal law of October 17, 1924, the various Cantons began to legislate upon the subject. Of the 25 Cantons, all but one have passed laws based upon and supplementing the Federal law; this Canton, Unterwalden, is an agricultural region and no legislation on the subject is anticipated in the near future.

The basis of the cooperation offered by the Cantons in every instance is that of additional subsidies to either private or public insurance funds or companies. The conditions imposed in every Canton are practically the same as those defined by the Confederation. The amount of subsidy granted to the funds varies from 10 to 45 per cent of the amount of unemployment benefits paid out by the funds.

In addition, certain Cantons have assisted the setting up, by the funds, of reserves, for periods of economic stress, and have granted money for the establishment of such reserves. Also the cantonal laws in certain cases made the insurance compulsory for certain classes of labor, and created for this purpose public cantonal funds. Others left it to the communes in the Canton to decide whether the insurance should be compulsory or voluntary. Thus there are really four groups of Cantons from the standpoint of the execution of the Federal law regarding unemployment insurance:

Group 1, comprising Cantons which have made the insurance compulsory for all or part of their workers, or which have instituted a public cantonal fund, and which pay subsidies to this fund as well as to other funds which are qualified to receive the Federal subsidy. This group includes the Cantons of Glarus, Neuchatel, Schaffhausen, Uri, Zug, Solothurn, and Basel-Stadt.

Group 2, consisting of the Cantons which subsidize recognized funds and allow the communes to decide as to whether the insurance shall be compulsory. This group includes St. Gall, Lucerne, Ticino, Vaud, Valais, Zurich, and Appenzell Outer Rhodes.

Group 3, consisting of those Cantons which subsidize recognized funds, leaving the insurance to be sought voluntarily by the workers. This group includes the Cantons of Aargau, Appenzell Inner Rhodes, Basel-Land, Bern, Geneva, Grisons, Schwyz, and Thurgau.

Group 4, including the Cantons which have as yet passed no laws on the subject of unemployment insurance. The twin Canton of Unterwalden, with its two sections of Nidwalden and Obwalden, is the only one in this category.

#### Number of Funds, and Scope of System

As a result of the legislative measures and regulations adopted in rapid succession by the Confederation, the Cantons, and their communes, a large number of organizations having as their sole object the carrying on of this type of insurance came into being. In French-speaking Switzerland these are known as "caisses de chômage," and in German-speaking sections as "Arbeitslosenversicherungskassen." These organizations are of three kinds: The public fund, set up and administered either by a Canton or a commune; the private mutual fund set up and administered through cooperation of employers and workers; and the private workers' or trade-union fund, which is administered and financed entirely by workers' associations.

The table below shows the distribution of the various types of funds.

TABLE 1.—NUMBER OF UNEMPLOYMENT INSURANCE FUNDS OF EACH TYPE IN SWITZERLAND, 1925 TO 1929

Year	Public funds	Private workers	Private mutual (factory) funds	Total number of funds
1925	18	37	5	60
1926	53	33	19	105
1927	65	37	57	159
1928	65	39	63	167
1929	65	40	70	175

The following table shows the number of members of unemployment funds for the past six years:

TABLE 2.—NUMBER OF PERSONS WITH MEMBERSHIP IN UNEMPLOYMENT INSURANCE FUNDS IN SWITZERLAND, 1925 TO 1930

Year	Men	Women	Total
1925	123,280	26,370	149,650
1926	128,138	37,358	165,496
1927	178,275	62,627	240,902
1928	195,453	69,194	264,647
1929	221,143	71,856	292,999
1930			323,754

At the end of the year 1929 it was calculated that 39.4 per cent of all salaried workers in Switzerland who could be considered as eligible for unemployment insurance were members of some kind of insurance fund.

In all Cantons in which there is legislation covering unemployment insurance any salaried individual is entitled to become a member of an organization which would grant him the benefits of such insurance. In addition to covering workers in factories and in the trades, and salaried employees, insurance against unemployment may extend to persons engaged in agriculture. The sole exclusion covers persons working on their own account, but even such persons may insure if their activity is of the same character as that of a salaried worker.

### Contributions

THE contributions of the workers vary according to the type of insurance fund to which they belong, to the occupational group to which they are assigned, and to the risk involved. For instance, a higher rate of contribution is required in the case of road workers, inasmuch as such work is seasonal and classified as a poor risk, whereas a clerk in a financial institution would be considered as an unusually good risk and would be charged a lower rate.

Contributions in almost every case are related to both wages and earnings of the worker, and are divided into two classes. These are as follows: Persons in class 1 (the factory system) pay from two-tenths to three-tenths of 1 per cent, deducted from salary or wages. Class 2 has three divisions (on a wage basis); those in division (a) pay 2 francs (38.6 cents) per month, division (b) 1.50 francs (29 cents) per month, and division (c) 1 franc (19.3 cents) per month. Thus, those in division (a) would contribute 24 francs (\$4.63) per year and would be entitled to a benefit of 7 francs (\$1.35) per day.

In Cantons in which compulsory insurance is in force there are actually two obligatory classes: (a) All workers subject to the factory inspection laws, and (b) those receiving from 4,000 to 6,000 francs (\$772 to \$1,158) per annum.

As a general rule, the insured must contribute at the rate of at least 30 per cent of the daily benefits paid, even if the total contributions to the insurance fund should exceed 70 per cent of the benefits paid out. For example, in many Cantons the contributions are divided as follows:

	Per cent
Confederation.....	40
Canton or commune.....	30
Workers.....	30
Total.....	100

The fund must place any contribution in excess of 100 per cent in its reserve fund.

The table on the following page shows the contributions of the Cantons to the three different types of funds, in terms of percentage.



TABLE 3.—PER CENT CANTON'S CONTRIBUTION FORMS OF TOTAL CONTRIBUTIONS TO VARIOUS TYPES OF FUNDS

Canton	Per cent of total contribution made by Canton to—					
	Public funds		Private work-ers' funds		Private mutual (factory) funds	
	Ordinary rate	Crisis rate	Ordinary rate	Crisis rate	Ordinary rate	Crisis rate
Basel-Stadt.....	45	—	45	—	45	—
Geneva.....	40	—	40	—	40	—
Grisons.....	40	—	30	—	40	—
Glarus.....	30	—	30	—	30	—
Appenzell Outer Rhodes.....	25-35	—	25-35	—	25-35	—
Solothurn.....	25	35	25	35	25	35
Fribourg.....	30	—	15	—	30	—
Zurich.....	25	—	25	—	25	—
Thurgau.....	(1)	(1)	25	—	25	—
Valais.....	20-30	—	<sup>2</sup> 10	—	20-30	—
Basel-Land.....	25	—	20	—	20	—
Zug.....	20	30	20	30	20	30
Schwyz.....	20	30	20	30	20	30
Uri.....	20	30	20	30	20	30
Aargau.....	20	—	20	—	20	—
Appenzell Inner Rhodes.....	20	—	20	—	20	—
Lucerne.....	20	—	20	—	20	—
Vaud.....	20	—	15	—	20	—
Neuchatel.....	20	—	15	—	20	—
Bern.....	10	20	10	20	10	20
Ticino.....	10	15	10	15	10	15

<sup>1</sup> No public fund.<sup>2</sup> Maximum.

*Period of contribution.*—As already stated, the period of contribution must be uninterrupted, except in case of illness or military service. In the latter case the number of days of such illness or military service is added to the period of 180 days required for unemployment benefit.

### Benefits

A BENEFIT may be paid only in the case of unemployment on the part of the worker through no fault of his own. The beneficiary must have registered at an employment office and must show that he has been unable to find suitable employment. A statement must be submitted from the last employer giving the reason for the discharge and showing the salary received by the worker.

The right to benefit starts only when the insured has become a member of the fund and when he has paid his contributions for a period covering 180 days. Before benefit begins there is a waiting period of three days after his registration at the employment office, except in case the worker has already observed a similar waiting period during the course of the year, and has been unemployed for at least three months.

When unemployment is the result of a collective labor dispute, no benefit may be paid during that period or during the following 30 days. In case the worker is incapable of working, no indemnity may be paid to him during the period of such incapacity. It may be mentioned here that a worker incapacitated by sickness becomes a beneficiary of the sickness insurance, which is compulsory for many classes of labor.

While the Federal law states that no more than 90 days' benefit may be paid during a period of 360 days, it also states that the period may be extended by Federal decree. During 1930 and 1931 benefit periods have lasted as long as 210 days.

Benefits are allotted according to a classification based upon the wage or salary. In some Cantons the maximum is fixed, and in such cases, irrespective of the rules of the fund, the cantonal maximum can not be exceeded. However, as a rule, based on figures of some of the largest workers' funds, the unmarried beneficiary who contributed the maximum of 2.10 francs (40.5 cents) per month would be entitled to 8 francs (\$1.54) per day benefit, and the married worker, 9.60 francs (\$1.85). The majority of the benefit payments range from 6 to 7 francs (\$1.16 to \$1.35) per day, plus 1 franc (19.3 cents) for each child. In the textile industry the beneficiary receives a minimum of 2 francs (38.6 cents) per day. In no case, however, may the benefit exceed 50 per cent of the normal wage in the case of an unmarried person or 60 per cent in the case of a beneficiary with dependents.

In case of partial unemployment, the total benefit must not exceed 80 per cent of the normal wage, including the amount actually earned, for a married worker, nor more than 70 per cent including the earned sum, in the case of a beneficiary with no dependents. The right to benefits for partial unemployment ceases as soon as the insured has received an amount equal to 90 full days' benefits within a period of 360 days.

If unemployment should manifestly be due to the fault of the beneficiary, but the fault was slight, benefit may be paid at the expiration of a period of at least four weeks.

If an insured worker who is receiving benefit should refuse an offer of employment, the arbitration commission of his fund or the labor bureau of the commune, Canton, or the Federation shall decide whether such proposed work is suitable. In the case of fraud no benefit shall be paid. Any member failing through his own fault to pay such contribution as may be due shall no longer be entitled to receive a benefit under the insurance system.

Benefit may not be granted to the following classes of workers: (a) Any worker who does not avail himself of a suitable offer of employment, or who fails to seek work by reason of his own fault; (b) any worker who does not comply with the regulations of the law or of his recognized fund; and (c) any worker who gives inaccurate or incomplete information regarding his employment status, or who otherwise attempts to secure undue benefits.

*Transfer of benefit.*—Any worker who is employed may transfer from one fund to another, whether leaving voluntarily or dropped by a recognized fund through no fault of his own, provided he has fulfilled his obligations to the first fund. Thereupon, the fund to which such worker transfers must confer the same rights upon him after a period of affiliation of four weeks, and as soon as he has paid contributions for that period. In this case, the statutory waiting period necessary before the benefits commence is to be reduced by a period equal to that for which the insured has paid contributions to the former fund; however, in no case is the fund obliged to reduce the waiting period to less than four weeks. A

worker must be credited at the new fund in the amount paid to the fund from which he may transfer.

No worker going from one fund to another fund may leave the latter without having paid the total of one year's contributions after having enjoyed insurance benefits from the first fund.

#### Administration of System

FEDERAL subsidies are granted only to unemployment funds which have at least 200 members, except in certain cases when the fund is just started. These funds, as mentioned heretofore, are of three general classes, which are here described more in detail.

The first comprise the public funds, formed by different Cantons or communes, sometimes having only a few members. It will be seen by reference to Table 1 that during the past four years there has been practically no growth in the number of these funds, as their purely local character is a disadvantage.

The second group includes the private workers' funds (*Privat einseitige Kassen* or *Caisses Mutuelles Privées*), which are funds organized and financed by workers, and under the management of committees of workers or hired officials. Some of these belong to trade-unions, some to socialistic organizations, and some to organizations of a partly social and partly religious character. Among these is the large group, Schweizerischer Verband Evangelischer Arbeiter und Angestellter.

The third group is that of the private mutual organizations, usually referred to as the factory system (*Privat paritätische Kassen*, or *Caisses Paritaires Privées*). These are operated in common by employers and workers, each paying a contribution.

Referring again to Table 1, it will be seen that the second group is also failing to grow in numbers, while the third group, or the mutual societies belonging to both workers and employers—the factory system—is growing in numbers each year. Starting in 1925 with only 5 funds, there were 70 such funds in 1929, and there are more in existence now. Their disadvantages, however, are that they are only local in character and that through the withdrawal or failure of the firm the membership of the workers is also extinguished.

The number of workers insured with the public funds is, in round figures, 15 per cent of the total, with the third group, or factory mutuels, around 20 per cent, and with the workers' associations, around 65 per cent or nearly twice the number insured with the other two groups combined.

As the 1930 figures showed 323,754 insured workers, and as it is safe to say that there are at least 800,000 workers in the country, it will be seen that about 3 out of 8 workers enjoy this protection.

The funds are required to keep strict account of all money received and disbursed, and to submit a report annually to the Confederation before any subsidy may be allotted. The Federal subsidy amounts to 40 per cent of the daily benefits in the case of the public funds and the funds administered in common by employers and employees, and 30 per cent of the daily benefits in the case of the workers' associations. The Federal Council may temporarily increase the rate of the subsidy by a maximum of 10 per cent.



In the case of the mutual societies, or factory system funds (*Caisses Paritaires*) contributions are deducted weekly by employers from the wages or salaries of the employees. The payments made to the workers' associations are sometimes made in cash, and sometimes in the form of stamps which are purchased either direct from the fund or from the post office. The public funds rarely collect the contributions from their members in cash, but use the special stamps which are pasted on the insurance book or card.

### Statistics of Operation

THE following table shows the total number of people in Switzerland insured against unemployment in 1930, and the number of persons who drew insurance benefits during the same period.

TABLE 4.—NUMBER INSURED AND NUMBER OF BENEFICIARIES OF SWISS UNEMPLOYMENT INSURANCE FUNDS IN 1930

Type of fund	Total number of persons insured	Beneficiaries		
		Men	Women	Total
Public funds.....	67, 137	13, 208	7, 692	20, 900
Workers' funds.....	187, 644	30, 038	8, 741	38, 779
Factory funds.....	68, 973	6, 653	7, 609	14, 262
Total.....	323, 754	49, 899	24, 042	73, 941

The total receipts and disbursements and cost of administration in 1930 were as follows:

TABLE 5.—RECEIPTS AND DISBURSEMENTS OF SWISS UNEMPLOYMENT INSURANCE FUNDS IN 1930

[Conversions into United States currency on basis of franc=19.3 cents]

Class of funds	Receipts		Disbursements		Cost of administration	
	Swiss currency	United States currency	Swiss currency	United States currency	Swiss currency	United States currency
Public funds.....	Francs 4, 540, 779	\$876, 370	Francs 3, 843, 422	\$741, 781	Francs 441, 327	\$27, 276
Workers' funds.....	14, 055, 967	2, 712, 802	11, 229, 365	2, 167, 267	223, 271	43, 091
Factory funds.....	2, 722, 014	525, 349	2, 166, 508	418, 136	82, 485	15, 920
Total.....	21, 318, 760	4, 114, 521	17, 239, 295	3, 327, 184	447, 083	86, 287

It is the endeavor of all classes of funds to limit the cost of administration to not more than 15 per cent of the paid-in contributions. However, during prolonged periods of economic depression such as in 1930, it is impracticable to maintain administration costs at such a low level.

No truly accurate information in regard to surplus, deficits, etc., for the entire system, is available at the present time. It is believed, however, that the unemployment insurance expenditures will amount to 30,000,000 francs (\$5,790,000) in 1931, of which the share of the Confederation will be 12,000,000 francs (\$2,316,000). In nearly all

of the Cantons, however, there are clauses in the cantonal laws which call for the making up of yearly deficits in the public or private funds by the cantonal treasury.

### Attitude Toward the System

WHEN insurance against unemployment was first introduced in Switzerland there was a certain amount of discontent and distrust on the part of the public in view of the possibility of abuse. This feeling was especially prevalent during the economic crisis of 1922-1924, when there were many people in Switzerland without employment. These conditions led to the enactment of the law of October 17, 1924, which has since been interpreted by means of ordinances.

Since the enactment of the initial legislation and the systematization of the operation of the contributions and benefits, distrust has gradually dissipated. At the present time insurance programs against unemployment are well received on the part of the public, employers, and employees. However, the opinion seems to prevail that existing legislation can be improved.

The principle of government subsidy for organizations engaged in social work is well established in Switzerland, and although various groups are vocal in recommending changes, such changes will not be put into effect without very careful consideration.

Further remarks concerning the attitude of various groups and political divisions of the country are made later on in this report in the section dealing with each Canton as a unit.

### Changes Under Contemplation

RECOMMENDATIONS on the part of funds, as well as by cantonal authorities, have been made from time to time. These include the following: (1) More uniform regulations for the whole of Switzerland and unification of the system; (2) greater benefits for married beneficiaries; (3) equalization of the Federal subsidy for all funds; (4) extension of the period of 90 days for benefits, with a fixed limit; and (5) an amendment which will avoid any chance of unemployed workers' having to accept charity.

Other recommendations have been for a single insurance fund or company for all Switzerland, operated as a public fund. Another would make compulsory the setting up of public insurance groups by each Canton. Still another would make obligatory the subsidizing of all the existing companies by the Federal Government and put them all in the category of public organizations.

A very large workers' fund has set out as a program the following: The increase of the daily allowance, in case of small wages, where the legal amount is not equal to the needs of the family; an increase in the daily allowance according to the number of members in the family; a regulation of the amount of subsidy paid by each Canton to the insurance funds, so that the amount of cantonal subsidy will be the same in each Canton; and finally the introduction of obligatory insurance for every worker, in order to reduce the potential risk.

As a general thing, no single class except the farmers is inimical to the principle of unemployment insurance, and even the most conserv-

ative of employers are reported to believe that it tends to lower labor turnover, and keeps idle workers from the temptation of crime and revolutionary political intrigues.

### Fraud and Abuses

FRAUD on the part of members of insurance groups is rare. One of the large mutual companies, with 15,000 members, states that fraudulent claims by members do not involve even one-half of 1 per cent of the membership. Another, even larger, states that fraud does not come into its statistical review at all, as attempts are very rare. The law itself provides quite adequate measures to prevent and punish fraud. Still, some of the insurance companies have adopted checks other than those provided by the law against fraud, and maintain special investigators.

### Grievances and Disputes

GRIEVANCES and disputes are settled in different ways according to cantonal regulations and the rules of the various insurance groups. In the case of public insurance organizations, the cantonal courts (or the cantonal legislature itself) are the high authority in case of disputed claims or disagreements between the worker and his fund. The decision of the Federal Labor Department is the supreme authority for the entire country. The various insurance funds have in most cases set up courts of arbitration which decide disputes between the members and the management regarding all matters except actual claims for benefits. These claims, when disputed, are usually settled by the cantonal labor bureaus, with the Federal Labor Bureau acting as the appeal court. Some funds leave the settlement of all disputes to the cantonal courts, and in some Cantons this means of arbitration is compulsory. In these cases the cantonal court decision is final and can definitely settle claims arising from undeserved discharge and other administrative troubles, as well as claims for benefits which are in dispute. The decisions of the cantonal courts are recognized by the Federal Labor Bureau.

### Canton of Appenzell Inner Rhodes

THIS Canton by its law of December 27, 1927, obligated itself to reimburse both public and private unemployment organizations which are recognized by the Confederation, up to 20 per cent of the daily benefits paid to unemployed workers.

A further provision of the law states, however, that the poor funds of the various political districts or communes must return to the cantonal treasury a portion of this subsidy, in case payments of unemployment benefits are made to residents of the communes. Although the law permits each commune to set up a public insurance organization, none of them has as yet done so as far as could be learned. The Canton is largely agricultural, however, and the need for unemployment insurance is relatively very slight.



## Canton of Appenzell Outer Rhodes

THE Canton of Appenzell Outer Rhodes was the first of the two Appenzell Cantons to enact a law based on the Federal unemployment insurance measure; its law was passed April 25, 1926, and went into effect January 1, 1927.

The Canton grants subsidies not only to the public insurance organizations or funds but also to private funds which are recognized by the Federal Government. The rate of the cantonal subsidy is from 25 to 35 per cent of the benefit payments made to insured members residing in the Canton. The cantonal legislature may also vote from 20,000 to 30,000 francs (\$3,860 to \$5,790) to this end, and in times of crisis the outlay may reach 50,000 francs (\$9,650). Any portion of the yearly credit voted which is not needed is paid into a reserve fund destined to be drawn on in times of extreme crisis.

Each political district or commune in the Canton is directed by the law to set up a public insurance organization as soon as 12 or more workers register their wish to be insured, although two or more districts may unite in forming an insurance fund if they desire. Each commune may make insurance obligatory for all of its workers, or for certain classes only.

## Canton of Aargau

THE revision of unemployment legislation by the Canton of Aargau took place on November 4, 1926, and originally provided for an operation period of two years. This has been extended since, and the regulations promulgated in 1926 will be in effect until the end of 1932. Before that date it is expected that an entirely new law will be enacted, providing for a limited liability insurance corporation, managed by the Canton.

In the meantime the Canton is subsidizing the private insurance groups to the extent of 20 per cent of the total benefits paid by them.

In 1926, 16 cooperative insurance groups were operating under Federal approval in Aargau. At the end of 1927, nine groups were receiving cantonal subsidies, and the total for the year which the Canton contributed was 9,534 francs (\$1,840). The table following shows the number of persons covered by insurance for the years 1926, 1927, and 1928, together with the amounts paid out by the insurance organizations:

TABLE 6.—UNEMPLOYMENT BENEFITS PAID IN CANTON OF AARGAU, 1926 TO 1928

[Conversions into United States currency on basis of franc=19.3 cents]

Year	Num- ber of persons insured	Num- ber re- ceiving benefits	Amount of benefits		Average benefit per person	
			Swiss cur- rency	United States cur- rency	Swiss currency	United States currency
			<i>Francs</i>		<i>Francs</i>	
1926.....	7,118	592	47,671.31	\$9,200.56	80.52	\$15.54
1927.....	7,582	509	48,057.06	9,275.01	94.41	18.22
1928.....	13,097	456	33,298.61	6,426.63	73.02	14.09

**Canton of Basel-Land**

THE first legislation creating an unemployment insurance system in the Canton of Basel-Land was enacted June 23, 1930, and became effective January 1, 1931. A cantonal office for unemployment insurance was established by the law, and provision is made for the regulation and subsidy of certain private funds, which are allowed to continue operations in conjunction with the cantonal office. Only private institutions having more than 300 members can be granted a subsidy by the Canton. There are 27 such institutions in operation now. Compulsory unemployment insurance is established for certain classes of workers, and it is provided that certain other classes are not permitted to be insured.

The contribution prescribed for all classes of workers insured by the cantonal public fund is five-tenths of 1 per cent of the wages or salary received. Contributions are to be paid monthly in cash.

Employers of insured persons have to contribute a sum equal to fifteen-hundredths of 1 per cent of the wages paid out to insured persons. Government administrations and certain other classes of employers are exempt from this provision.

The subsidy of the Canton to the cantonal public fund amounts to 25 per cent of the total sum paid out annually as benefits to members, while for the private organizations the subsidy is 20 per cent of the annual benefits paid out. A 10 per cent contribution is required from the municipalities or communes.

Benefits by members may be drawn after 180 days of membership and contribution payments. In the first year of membership benefits may be paid for a maximum period of 50 days. This period may be increased by 10 days annually until the maximum of 90 days set by Federal law is reached. The minimum benefit granted daily is 3 francs (57.9 cents) in the case of persons without dependents, while for persons having others to support the rate is from 5 to 7 francs (96.5 cents to \$1.35) daily.

The administration of the cantonal public fund and the regulation and control of the private funds are under the direction of the cantonal labor office.

The contributions of all insured persons in the Canton of Basel-Land are deducted by employers from the wages. Employers deduct the contributions monthly, but remit them semiannually to the labor office, which in turn makes the distribution according to the institution or association in which the persons concerned are insured. According to an official of the Basel-Land Labor Office, the Canton Basel-Land is the first in Switzerland to introduce the system of collecting contributions through the employer.

As in the Cantons of Basel-Stadt and Solothurn, the law provides punishment and fines for cases of fraud committed by insured persons. As the law has been in operation for such a short time there are no data available as to the frequency of fraud, but as there is no city in the Canton of more than 10,000 inhabitants, it is believed that control will be easy, and fraud almost nonexistent.

Appeal in cases of dispute or grievances can be made to a special commission composed of five members, two being employers, two employees, and the fifth being the president of the cantonal supreme court as chairman.

The total number of persons insured against unemployment in the Canton is said to be from 18,000 to 20,000, of whom about half are insured with the cantonal public fund. No statistics are as yet available with respect to receipts and expenditures, or cost of administration. It is understood that administration expenses are borne by the Canton independently of contributions and subsidies received.

No important changes in the system are contemplated by the legislative authorities, or urged by any important groups.

#### **Canton of Basel-Stadt**

THE first legislation of the Canton of Basel-Stadt relating to unemployment insurance was enacted on December 16, 1909, and became effective May 2, 1910. This law established a cantonal office for unemployment insurance, and provided for the regulation and subsidy of private unemployment insurance organizations which might continue to operate in conjunction with the cantonal office. Unemployment insurance was not compulsory under this law, which remained in force until the enactment of entirely new legislation on February 11, 1926.

The law of February 11, 1926, makes it compulsory for certain classes of workers to be insured, either with the cantonal office, or with officially recognized private organizations. Inhabitants of the Canton who are capable of working, are over 16 years of age, and not engaged in independent occupations, must be insured, with the exception of persons in the following classes: (a) Personnel of the Federal offices, and administrations and officials and employees of foreign governments, as well as the permanently employed personnel of the cantonal and municipal offices; (b) domestic and agricultural servants; (c) home workers, persons who work by the hour or day in households, and porters; (d) house-to-house salesmen and travelers on commission; (e) apprentices coming under the law concerning apprenticeship; and (f) workers whose regular income (salary, wages, regular fixed additional sums) is in excess of 6,000 francs (\$1,158) per year.

There are at present 23 officially recognized private organizations in the Canton of Basel-Stadt which undertake unemployment insurance and receive cantonal and Federal subsidies in accordance with the laws of the Federal and cantonal governments. As stated, workers subject to compulsory insurance may be insured by either the cantonal institution or by one of the officially recognized private funds. Employed persons belonging to classes exempted from compulsory insurance may as a rule be voluntarily insured with the cantonal fund or with one of the private funds. The majority of the private funds are administered jointly by employers and workers, the employers usually paying part of the contribution; but some of the private organizations are administered by trade-unions, and in such cases the workers, of course, pay all the contributions.

The law of February 11, 1926, is still in force, but has been twice amended as follows: An amendment of January 27, 1927, made certain changes of minor importance with regard to the payment of contributions and conditions for granting the cantonal subsidy, and an amendment of March 1, 1929, authorized the executive council of the cantonal government to increase the usual rates of assistance for certain trades and in times of economic crisis.



The cantonal subsidy for private unemployment insurance associations as well as for the cantonal fund amounts to 45 per cent of the amount paid annually as benefits. All employers in the Canton of Basel-Stadt are requested to contribute to a so-called "crisis fund" two-tenths of 1 per cent of the amount of wages paid out to their employees. This fund is not used unless the cantonal subsidy to all of the unemployment insurance institutions, public and private, exceeds five times the contribution of the employers.

Contributions paid by members of the cantonal insurance fund are related to wages or earnings according to the following classification:

TABLE 7.—CONTRIBUTIONS OF MEMBERS OF UNEMPLOYMENT INSURANCE FUND OF BASEL-STADT

[Conversions into United States currency on basis of franc=19.3 cents]

Wage class	Daily wage	Monthly contribution	
		Swiss currency	United States currency
		<i>Francs</i>	<i>Cents</i>
Class 1.....	Up to 6 francs (\$1.16).....	0. 70	13. 5
Class 2.....	6.01 to 9 francs (\$1.17-\$1.74).....	1. 00	19. 3
Class 3.....	9.01 to 12 francs (\$1.75-\$2.32).....	1. 50	29. 0
Class 4.....	12.01 to 14 francs (\$2.32-\$2.70).....	2. 00	38. 6
Class 5.....	Over 14 francs (\$2.70).....	2. 50	48. 3

Persons insured by the cantonal insurance institution are entitled to a benefit only when they have been members for a period of 180 days and have paid their premiums for this period. The maximum period during which members may receive benefits is 90 days annually, but this period may be extended under exceptional conditions. The usual amount of daily benefit for each of the five classes described above is as follows:

TABLE 8.—DAILY BENEFITS OF UNEMPLOYMENT INSURANCE FUND OF BASEL-STADT

[Conversions into United States currency on basis of franc=19.3 cents]

Class	Persons with dependents		Persons without dependents	
	Swiss currency	United States currency	Swiss currency	United States currency
	<i>Francs</i>		<i>Francs</i>	
Class 1.....	<sup>1</sup> 60	<sup>1</sup> 60	<sup>1</sup> 50	<sup>1</sup> 50
Class 2.....	5. 00	\$0. 97	4. 00	\$0. 77
Class 3.....	5. 75	1. 11	4. 50	. 87
Class 4.....	6. 50	1. 25	5. 00	. 97
Class 5.....	7. 00	1. 35	5. 50	1. 06

<sup>1</sup> Per cent of wage.

There is no right to benefit under the following circumstances:

(a) When the employee leaves his employer without definite assurance of other work, unless he has reasons which entitle him to leave, such as being forced to continue under conditions contrary to the contract, or being forced to accept wages lower than those usually paid for the specific kind of work.

(b) When the unemployment is due to the conduct of the insured and dismissal is permitted according to the Federal factory law and the cantonal laws.

(c) When unemployment is due to collective labor disputes, during the duration of the conflict and the succeeding 30 days.

(d) When unemployment is the consequence of sickness or accident of the insured, during the time of invalidity.

(e) When the insured does not comply with the regulations concerning control.

(f) When the insured refuses, without sufficient reason, to accept work which has been offered to him, or when he can not find work due to his own fault or negligence.

(g) When the insured knowingly makes untrue statements with respect to the claim for insurance or the class of premium to be paid.

The administration of the cantonal unemployment insurance office and the control of private unemployment insurance organizations are under the direction of a bureau of the cantonal department of the interior. A special board has been created for the supervision of the affairs of this bureau. The bureau itself has six employees—one manager and five clerks. The expenses of administration amount to approximately 45,000 francs (\$8,685) annually.

Contributions must be paid monthly in cash, and evidence of payment is shown by stamps attached to membership books. The law provides punishment and fines for cases of fraud committed by insured persons. In every instance when benefit is granted, either by the cantonal institution or by a private organization, a careful investigation is made. The number of cases of fraud discovered has averaged about 10 in each of the recent years.

Disputes and grievances are first brought before the manager of the cantonal office and may be appealed to higher authority, eventually to the executive council and the cantonal legislature.

The cantonal insurance office had 11,095 members at the end of 1929. There were on the same date 23 private organizations in the canton, and these had 25,757 members.

According to the manager of the Basel labor office, the attitude of employers, workers, and the public as a whole in Basel-Stadt is generally favorable to the principle of unemployment insurance, and to the particular system now in force. Officials of the cantonal government, it is said, would greatly prefer a system providing for government monopoly, because they find that private associations, the trade-unions in particular, are in many cases too lenient in applying their own, the cantonal, and the Federal regulations. It is considered unlikely, however, that proposals to establish a government monopoly would meet with the approval of the cantonal legislature, and even if passed by the legislature there would be still less chance of a favorable referendum vote by the people.

Abuses under the system are few, however. As stated above, the number of cases of fraud discovered is only about 10 annually. A great difficulty in collecting contributions is reported; the number of reluctant contribution payers brought before court amounts to approximately 500 per year.

There are no important changes in the system contemplated by the legislative authorities or urged by any important groups.

### Canton of Bern

UNDER the law of May 9, 1925, and the ordinances of April 24 and October 6, 1926, the Canton of Bern allots to public and private unemployment insurance funds having their headquarters or branches within the Canton a subsidy equal to 10 per cent of the benefits paid to the unemployed domiciled in that territory, which may be increased by a maximum of 10 per cent during a crisis. In addition, the commune in which the beneficiary is living must grant to the fund which receives a subsidy from the Canton an amount equal to at least 10 per cent of the benefits paid. Several communes pay subsidies at a higher rate. All funds are exempt from cantonal and communal taxes.

At the end of September, 1930, 39.4 per cent of the people receiving salaries in the Canton of Bern were entitled to unemployment insurance. In 1929, with a total population of 706,900, there were 36,128 insured people, and of the total insured 8,448, or 23.3 per cent, received benefits aggregating 1,363,971 francs (\$263,246). The average daily benefit was 5.60 francs (\$1.08), and the average period of benefits was 29 days.

It has recently been recommended to the cantonal authorities that a new law be enacted providing for compulsory insurance. The Canton now pays nearly the lowest subsidy in the Confederation, and it is not improbable that a new law may be enacted, whereby the amount of the cantonal subsidy will be changed from the existing rate of 10 per cent to 10, 15, 20, and 25 per cent, according to the insurance risk.

### City of Bern

AN unemployment fund has existed in the city of Bern since 1893, and under regulations promulgated October 2, 1925, and modified March 11, 1927, the city grants a subsidy to public funds equal to 25 per cent of the benefits paid, which may be temporarily increased to 35 per cent. In the case of private insurance organizations, the city refunds to them, under certain conditions, 20 per cent of the benefits paid, which may be increased, in time of need, to 30 per cent.

In common with nearly all other subsidy regulations, these grants of the city are limited in duration, the maximum being 80 days for each worker during a period of 360 days.

Funds appropriated by the city council which are not utilized during the course of the year are transferred to a reserve, which may be drawn upon to meet deficits or extraordinary contingencies during periods of crisis.

Under provisions of the communal law whereby suburban communes may be affiliated with the fund of the City of Bern, agreements have already been concluded between the city of Bern and the following communes: Belp, Bolligen, Bremgarten, Diemerswil, Frauenkappelen, Jegenstorf, Kehrsatz, Kirchlindach, Kosnitz, Moosseedorf, Munchenbuchsee, Neueneck, Stettlen, Vechingen, Wohlen, and Zollikofen.

### City of Bienne

BY A decree of June 13, 1926, the city of Bienne instituted a public fund and provided for the granting of subsidies to private funds.



The public fund receives an annual subsidy equal to 25 per cent of the benefits paid, which during a period of crisis may be increased to 40 per cent. The recognized private funds are entitled, under certain conditions, to a subsidy of 20 per cent, which may be increased to 30 per cent during periods of crisis. In the case of both private and public funds the subsidy is granted for a maximum of 80 days of unemployment during the course of 360 days.

As in the regulations of the city of Bern, funds which are appropriated but not expended during any given year are placed in a special reserve for use during periods of exceptional unemployment.

#### Canton of Fribourg

UNEMPLOYMENT insurance in the Canton of Fribourg is provided for in the law of November 13, 1928. The cantonal subsidy is determined by the amount of daily benefits paid by the insurance organizations.

In the case of public funds and insurance funds operated jointly by employers and employees the subsidy amounts to 30 per cent of the benefits paid, and for the other funds (those managed and financed by trade-unions or workers) the subsidy amounts to 15 per cent of the benefits paid.

Benefits may not be paid to insured persons who have not attained the age of 16 years or who live outside of the Canton.

#### Canton of Geneva

THE first law enacted in the Canton of Geneva based upon the Federal law of October 17, 1924, was dated September 26, 1925, and became effective January 26, 1926. Under this law the cantonal government pays an amount equal to 40 per cent of the total benefits paid to persons domiciled in the Canton by those private organizations which receive contributions and pay benefits under a system similar to ordinary insurance.

The most recent law on the subject, dated September 27, 1930, which was adopted by the Geneva council on the 7th and 8th of February, 1931, to become effective on the 18th of February, 1932, makes insurance against unemployment obligatory. Under this law such insurance must be taken out by persons between the ages of 18 and 65 years, who have been domiciled for at least one year in the Canton and are working regularly for another, either with the Geneva Cantonal Unemployment Insurance Fund (*Caisse Cantonale Genevoise d'Assurance-Chômage*) or with one of the recognized private organizations.

The status of the cantonal organizations has not yet been worked out by the Council of States and the contributions to be paid by workers have not yet been decided. The administration of the cantonal system will be under the direction of the department of hygiene.

At present there are approximately 3,500 persons covered by unemployment insurance in the Canton of Geneva, of which number 3,100 are men and 400 are women.

## Canton of Glarus

UNDER the law providing for unemployment insurance in the Canton of Glarus, passed by the legislature May 3, 1925, put into force January 1, 1926, and modified by order of the superior council December 2, 1926, all workers in factories or concerns subject to the Federal factory inspection service are required to insure themselves against unemployment in a recognized insurance organization. This requirement is also held to apply to workers in industries under the jurisdiction of the cantonal laws regarding workmen's welfare.

There is a cantonal public fund, maintained by the Federal subsidy, the cantonal subsidy, and contributions of the workers and their employers. The Canton grants a subsidy of 30 per cent of the amount of benefits paid and also bears the cost of administration.

All differences between workers and their insurance organizations are to be settled by the president of the civil court of the Canton.

All employers of labor required to be insured must pay a contribution equal to two-tenths of 1 per cent of their salaries. In case a factory-system insurance fund is operated, the contributions paid to the cantonal fund are refunded to the employers contributing to the factory-system fund.

The contributions for the cantonal public fund are based on 2 per cent of the yearly wages paid to insured workers. The Federal support comes to 40 per cent of the yearly costs, and the cantonal support to 30 per cent, so that the fund itself must provide 30 per cent from the contributions.

At the end of 1930 there were 7,600 persons insured against unemployment in this Canton, 7,172 of whom belonged to classes for which insurance is compulsory; 6,960 were members of the cantonal organization; and 212 were in private funds.

The usual precaution of requiring a certificate from the employer stating the cause of discharge is followed when applications for benefits are made, and since 1926 only four cases of attempted fraud have been discovered.

The principal classes of workers who have received benefits from the cantonal fund are employees of cotton-spinning plants, weaving plants, and cotton-goods printing factories. Unemployment in these industries is growing, and it is anticipated that the year 1931 will see an important increase in the number of benefits paid.

During the month of January, 1931, 766 persons were receiving benefits, amounting to 31,927.05 francs (\$6,161.92) for the month and in February the beneficiaries amounted to 1,046 and the cost was 42,771.85 francs (\$8,254.97). The payments made during the year 1930 to unemployed workers, listed by industries, are as follows:

TABLE 9.—TOTAL BENEFITS PAID TO UNEMPLOYED WORKERS IN CANTON OF GLARUS, 1930, BY INDUSTRIES

[Conversions into United States currency on basis of franc=19.3 cents]

Industry	Swiss currency	United States currency
	<i>Francs</i>	
Cotton spinning and weaving.....	51,340.25	\$9,908.67
Printing on cotton and silk.....	81,023.95	15,637.62
Silk weaving.....	7,246.80	1,398.63
Other industries.....	11,385.55	2,197.41
Total.....	150,996.55	29,142.33

The total sum was paid to 616 men, for a total of 17,299 working days, and to 1,273 women for 24,310 working days, during which they were unemployed.

A change in the cantonal law is anticipated for 1932, when it is believed that compulsory insurance will be voted for all workers in the Canton, and not simply those employed in plants which are subject to Federal inspection.

#### **Canton of Grisons**

IN accordance with the Federal law of 1924, a cantonal law was passed in the Canton of Grisons in 1926, creating regulations governing both public and private unemployment insurance organizations. These regulations were simple, stating only that such organizations should be approved by the Federal insurance authorities and receive the lawful financial support of the Federal Government. The original law provided for a cantonal contribution of 40 per cent of the amount of the Federal subsidy, but this was altered within the year to provide for a cantonal contribution of 30 per cent of the insurance benefits paid. The system is one of voluntary insurance.

At the end of the year 1930 there were 14 private insurance organizations operating in the Canton and having a claim on cantonal support. No public fund has so far been organized.

No reliable figures are obtainable for the Canton as a whole concerning the number of insured workers and their periods of unemployment, but the entire amount paid out by these private insurance groups during the year 1930 was not quite 30,000 francs (\$5,790), of which the Canton paid a little less than 10,000 francs (\$1,930).

This Canton is largely agricultural; it is the largest of all in area, but contains much land that is worthless for cultivation or grazing. The great winter resorts of Arosa, St. Moritz, Davos, and Pontresina are located in Grisons, and the income from the tourist trade is large. No changes in the cantonal law are anticipated in the near future.

#### **Canton of Lucerne**

THE Canton of Lucerne first took cognizance of the Federal law regarding unemployment insurance by issuing a set of regulations to the various district labor offices on November 25, 1925. By the end of 1928 over 4,000 workers in the Canton had insured in private trade-union or mutual factory-system unemployment insurance companies or groups.

On November 25, 1929, the first comprehensive law governing unemployment insurance was passed by the cantonal legislature. This law made insurance of certain classes of workers in the Canton obligatory, and the communes of the Canton in which these classes of workers were employed were permitted to set up public insurance funds should they so desire.

The law provides that the Canton shall subsidize both public and private funds to the extent of 20 per cent of the benefits paid, and requires the communes to supply a further 10 per cent. No public funds have been organized so far, however.



Full regulations concerning the above law were put into effect by the legislature on May 1, 1930. These set the contributions which workers should pay to the public funds as follows:

TABLE 10.—MONTHLY CONTRIBUTIONS OF WORKERS TO PUBLIC UNEMPLOYMENT INSURANCE FUNDS IN CANTON OF LUCERNE

[Conversions into United States currency on basis of franc=19.3 cents]

Class	Daily wage	Monthly contribution	
		Swiss currency	United States currency
		<i>Francs</i>	<i>Cents</i>
Class 1.....	Up to 5 francs (97 cents).....	0.50	9.7
Class 2.....	From 5 to 9 francs (97 cents to \$1.74).....	1.00	19.3
Class 3.....	From 9 to 13 francs (\$1.74 to \$2.51).....	1.50	29.0
Class 4.....	Over 13 francs (\$2.51).....	2.00	38.6

Benefits for the four classes were specified as follows:

TABLE 11.—DAILY BENEFITS PAID BY PUBLIC UNEMPLOYMENT INSURANCE FUNDS IN CANTON OF LUCERNE

[Conversions into United States currency on basis of franc=19.3 cents]

Class	Workers without dependents		Workers with dependents	
	Swiss currency	United States currency	Swiss currency	United States currency
	<i>Francs</i>	<i>Cents</i>	<i>Francs</i>	<i>Cents</i>
Class 1.....	2.00	38.6	3.00	0.58
Class 2.....	3.00	57.9	4.50	.87
Class 3.....	4.00	77.2	6.00	1.16
Class 4.....	5.00	96.5	7.50	1.45

The period for which benefits may be paid were set as follows: For the first year of membership, 40 days; for the second, 50 days; for the third, 60 days; for the fourth, 70 days; for the fifth, 80 days; for the sixth, 90 days.

There is no cantonal public fund being operated, but the cantonal subsidy is granted to the private funds, whether they be trade-union or factory system.

At the end of 1928 there were 4,511 workers carried on the rolls of the various unemployment insurance funds in the Canton, but this number dropped to 4,508 in 1929. The private trade-union funds are much the more popular, with 3,991 members, only 517 workers belonging to mutual or factory-system organizations.

#### Canton of Neuchatel

THE Canton of Neuchatel passed a law on May 17, 1926, adopting a compulsory system of unemployment insurance. It provides for subsidies to recognized funds, and imposes contributions on the part of employers.

All persons of the ages of 16 to 60 years, of Swiss nationality and domiciled in the Canton of Neuchatel for at least one year, who are

working regularly for one or more employers, are subject to unemployment insurance. Compulsory insurance does not apply to the following classes of workers, however:

(a) Those whose total annual income exceeds 6,000 francs (\$1,158), and those who possess property exceeding 40,000 francs (\$7,720) according to tax assessments.

(b) The personnel of the Federal, cantonal, and communal administrations, and of licensed transportation enterprises.

(c) Apprentices.

(d) Household domestics.

(e) Casual workers by the day or hour.

(f) Workers (not proprietors) engaged in agriculture, horticulture, and viticulture.

(g) Seasonal workers, such as carters, road makers, drainers, fishermen, and boatmen.

(h) Peddlers.

All three types of insurance organizations are recognized by the Canton, but subsidies in the case of the public funds and the factory-system funds are 20 per cent of the benefits paid, while that to the trade-union funds is but 15 per cent. However, the cantonal subsidy in the case of public funds may be increased to 25 per cent, provided the Federal Government takes similar action. In the case of the two other types of fund the cantonal subsidy may be increased by an amount equal to 50 per cent of the supplementary Federal subsidy.

Employers are required to contribute annually 6 francs for every worker coming under the compulsory insurance system. If, however, a worker is employed by more than one person or concern, each employer must contribute annually the sum of 3 francs. The employers' contributions are collected by the communes and paid by the latter into the cantonal insurance fund. The communes, however, may require employers to collect contributions from their employees and generally to supervise the administration of the system regarding their own employees.

The communes of La Chaux-de-Fonds and Le Locle, which are the principal centers for the manufacture of watches in the Canton of Neuchatel, also subsidize unemployment funds for benefits paid to their inhabitants. These communes refund to the cantonal public fund and to the factory-system funds 10 per cent of the benefits paid, whereas 20 per cent is refunded to trade-union organizations. This is the reverse of the policy followed by most Cantons and communes, which grant smaller subsidies to the trade-union funds than to the other two classes.

Certain changes have recently been made in the cantonal law, which are not yet published, having been voted on February 27, 1931. These relate to the by-laws of the cantonal public fund.

Contributions of insured persons are determined according to daily wages, without distinction as to family status, and are as follows:

TABLE 12.—MONTHLY CONTRIBUTIONS OF INSURED PERSONS IN CANTON OF NEUCHÂTEL

[Conversions into United States currency on basis of franc=19.3 cents]

Daily wages	Monthly contributions	
	Swiss currency	United States currency
	<i>Francs</i>	<i>Cents</i>
Up to 6 francs (\$1.16).....	1. 50	28. 9
6 to 8 francs (\$1.16 to \$1.54).....	1. 70	32. 8
8 to 10 francs (\$1.54 to \$1.93).....	2. 60	50. 2
10 francs (\$1.93) and over.....	3. 20	61. 8

It will be noted that these are among the highest contributions specified by any Canton.

In case of total unemployment the maximum benefit is fixed as follows:

TABLE 13.—DAILY MAXIMUM BENEFITS UNDER UNEMPLOYMENT INSURANCE IN CANTON OF NEUCHÂTEL

[Conversions into United States currency on basis of franc=19.3 cents]

Daily wages	Workers without dependents		Workers with dependents	
	Swiss currency	United States currency	Swiss currency	United States currency
	<i>Francs</i>	<i>Cents</i>	<i>Francs</i>	
Up to 6 francs (\$1 16).....	3. 00	57. 9	3. 60	\$0. 69
6 to 8 francs (\$1.16 to \$1.54).....	3. 50	67. 5	4. 80	. 92
8 to 10 francs (\$1.54 to \$1.93).....	4. 50	86. 9	6. 00	1. 16
10 francs (\$1.93) and over.....	5. 00	96. 5	7. 00	1. 35

The benefit may not exceed 50 per cent of the loss of normal wages in the case of insured members without dependents, and 60 per cent for those having dependents. Total unemployment is understood to mean that the insured can not find work during normal hours of labor within a period of 12 days.

Certain other changes relating to benefits and partial unemployment were recently made in the cantonal law in order to make it comply with the Federal law.

#### Canton of St. Gall

THE law of the Canton of St. Gall concerning unemployment insurance was passed by the legislature November 17, 1925, and took effect December 21, 1925, being one of the first cantonal laws enacted for the furtherance of the Federal law. A former cantonal law dating from 1894 dealing with unemployment relief was repealed at the same time.

One feature of the law is that it enables each political district of the Canton to make insurance obligatory for all workers in the district or commune.



All workers from 16 to 60 years old, living in the commune for more than three months, and who were not members of private or cooperative insurance societies at the time the law was passed, may be compelled to take out insurance.

Each district fund is under the full control of the communal government council (*Gemeinderat*), with the cantonal government council acting in an advisory capacity.

Each unemployed worker is entitled to not more than 90 days' benefits in each 360-day year, and benefits must not amount to more than 60 per cent of the normal wage, and for those workers who have no dependents, 50 per cent, thus conforming to the Federal law.

The following are the means of support for the authorized insurance associations: Entrance fees of the insured workers and their contributions; aid of the cantonal treasury, up to 50 per cent of the yearly payments made to the unemployed; subsidy of the Federal treasury; contributions of the political subdivisions or communes; gifts and other free-will contributions and interest thereon.

Surplus moneys over the yearly needs and which have been contributed by the communes are used to set up a reserve fund, to be drawn against at need.

It has been learned that at the next session of the legislature it is proposed to make several changes in the present law. These changes, it is believed, will have to do primarily with the methods of financing the system.

#### Canton of Schaffhausen

THE present law of the Canton of Schaffhausen governing unemployment insurance dates from July 9, 1928, and went into effect April 1, 1929. The system adopted is a compulsory one, requiring all workers who are over 18 and under 60 years of age to insure against unemployment.

Certain exceptions to this general law are made, namely those persons possessed of property of over 30,000 francs (\$5,790), or a yearly income of more than 6,000 francs (\$1,158), as well as employees and officials of the Federal or cantonal Government, of foreign public offices, and international transport concessions, such as employees of international dining-car companies. Further exceptions are domestic servants, agricultural workers, foresters and apprentices, seasonal workers, peddlers, and itinerant workers without homes.

Workers under 18 but over 16 years of age may insure voluntarily until the age of 18 is reached.

No one may be insured in more than one fund, and if a worker does not choose a private fund in which to insure within two months of the date on which he is legally required to be insured, he is arbitrarily made a member of the cantonal public group, with contributions due for the two months in arrears.

At the time of passage of the law the Canton set up its own unemployment group or fund, with resources announced as being derived from: (1) Contributions of the workers; (2) contributions of the employers; (3) contributions of the Canton; (4) contributions of the communes or municipalities; (5) contributions of the Federal Government; (6) a guaranty of all deficits from reserve funds or from the cantonal treasury; (7) gifts, fines, or other sources.

Every member of the cantonal public fund, irrespective of his wage or family needs, pays a contribution of 50 centimes (9.65 cents) per week. Every employer must contribute two-tenths of 1 per cent of the total wages paid to the workers in his employ who are by law required to be insured. However, if he contributes to a private or mutual factory-system fund for his employees, his contribution to the public fund is reduced by that amount.

The contribution of the Canton amounts to 2 francs (38.6 cents) per year for each member of an insurance group or fund, whether it be a private or public one. Besides this contribution per member, the Canton is liable for all deficits incurred by the cantonal public fund.

The district or commune must contribute 1 franc (19.3 cents) per year for each worker liable to insurance who has his residence in that commune.

The cantonal public fund is required to contribute, to private funds which have been approved, subsidies amounting to 60 per cent of that granted by the Federal Government. The subsidy of the Federal Government can be used only for the purposes prescribed by its regulations—that is, payment of benefits—but 30 per cent of all other contributions are intended by the terms of the law to go into a reserve fund set up by a gift of 100,000 francs (\$19,300) from the cantonal treasury. It is hoped that this fund will grow large enough to enable other contributions to be reduced.

On December 31, 1929, the public fund had 5,734 members, and the 14 approved private funds operating in the Canton had 2,922, or a total of 8,656 members. By the end of 1930 the public fund had grown to 6,460 members, while the private funds had only 2,803, a total of 9,263.

No changes in the present law are contemplated.

#### Canton of Schwyz

THE law respecting unemployment insurance in the Canton of Schwyz, under the Federal law of 1924 was passed by the cantonal legislature on November 28, 1928. It provided for a subsidy of 20 per cent of the total payments to unemployed who were insured in either public or private insurance organizations, provided these groups also were being subsidized by the Federal Government. A provision was also made for a possible increase in the cantonal subsidy of 10 per cent in time of need.

The first year of operation in the Canton was 1929. Eight cooperative groups, most of them national trade-union associations, applied for the cantonal subsidy, and the total payments made by them to the unemployed amounted to 12,109.35 francs (\$2,337.10), of which the Canton paid 2,421.85 francs (\$467.42). Fewer than 100 persons received payments during the year. The system is a voluntary one.

No changes in the present cantonal laws are anticipated. The legislature appropriated 3,000 francs (\$579) to cover its share of the 1929 payments, and the surplus of 578.15 francs (\$111.58) was set aside as a contribution to an emergency relief fund authorized in the cantonal law on unemployment insurance.

## Canton of Solothurn

THE law of the Canton of Solothurn relating to unemployment insurance dated October 31, 1926, was made effective with regard to certain sections as of January 1, 1926, but the principal features of the law became effective from January 1, 1927. The law is at present in full force, and no important amendments have taken place since its enactment. There are a few changes contemplated, however, which would increase the amount of the contributions somewhat and provide for a larger emergency subsidy by the Canton. The present standard subsidy is 25 per cent, with a 10 per cent emergency increase. It is proposed to make this emergency increase 20 per cent.

Unemployment insurance is compulsory for certain classes of workers, and voluntary for others. It is left optional with workers, in the case of compulsory insurance, whether they will be insured through the cantonal unemployment insurance institution, or through one of the officially recognized private funds. The law provides that all inhabitants of the Canton who are between the ages of 16 and 65, and are capable of working, and dependent upon others for employment, must be insured, with the exception of the following classes of persons:

(a) Officials and permanent workers in the administration and establishments of the Confederation or of any of the Swiss Cantons and municipalities.

(b) The permanent personnel of the Government licensed transportation firms and of the electricity and gas works.

(c) Female household servants.

(d) All female and male workers on farms who work in this capacity during at least six months of the year.

(e) Home workers whose home work is irregular, being on the average less than one-third of their weekly capacity for work, and when their earnings amount to less than 600 francs (\$115.80) per year.

(f) Persons dependent upon others for employment, whose regular yearly income is in the case of women more than 4,000 francs (\$772), and in the case of men more than 5,000 francs (\$965).

(g) Foreigners for whom the Federal subsidy is not obtainable, no agreement being made with the country of which they are nationals.

The exemption of further groups of persons from compulsory insurance may be made by decree of the cantonal council in such cases where the insurance seems superfluous or impracticable.

In the Canton of Solothurn there are at present 24 officially recognized private organizations which undertake unemployment insurance. Most of these were in existence previous to the passage of the cantonal law of 1926. They receive cantonal and Federal subsidies in accordance with the law of the Federal Government and the cantonal law. Some of them are factory-system funds, administered jointly by workers and employers, while others are trade-union funds, administered entirely by the workers who pay all the contributions.

No person may be insured by two funds at the same time, but as a rule those persons exempt by law from compulsory insurance are permitted to insure themselves with either the cantonal public fund or the private institutions.

Contributions to the cantonal insurance fund are related to wages or earnings, according to the following classifications:



TABLE 14.—MONTHLY CONTRIBUTIONS TO CANTONAL INSURANCE FUND OF SOLOTHURN

[Conversions into United States currency on basis of franc=19.3 cents]

Class	Daily wage	Monthly contributions	
		Swiss currency	United States currency
		<i>Francs</i>	<i>Cents</i>
Class 1.....	Up to 5 francs (97 cents).....	0.50	9.7
Class 2.....	From 5 to 9 francs (97 cents to \$1.74).....	1.00	19.3
Class 3.....	From 9 to 13 francs (\$1.74 to \$2.51).....	1.50	29.0
Class 4.....	Over 13 francs (\$2.51).....	2.00	38.6

The waiting time required before benefit can be received is 180 days, in accordance with Federal law. In the first year of membership benefits may be drawn for 40 days, which is increased by a period of 10 days per year, until a maximum of 90 days is reached. The amount of benefit regularly granted daily is as follows:

TABLE 15.—DAILY BENEFITS PAID BY CANTONAL FUND OF SOLOTHURN

[Conversions into United States currency on basis of franc = 19.3 cents]

Class	Persons without dependents		Persons with dependents	
	Swiss currency	United States currency	Swiss currency	United States currency
	<i>Francs</i>	<i>Cents</i>	<i>Francs</i>	
Class 1.....	2.00	38.6	3.00	\$0.58
Class 2.....	3.00	57.9	4.50	.87
Class 3.....	4.00	77.2	6.00	.97
Class 4.....	5.00	96.5	7.50	1.45

The usual provisions regarding the refusal of benefits to workers who are unemployed through their own fault or negligence are enforced.

The administration of the law is by a special cantonal office created for this purpose. There is a manager and seven clerks. The 132 municipalities or communes of the canton assist in the administration of the law and operate branch offices for the collection of contributions and the payment of benefits. Contributions must be paid monthly in advance in cash, and receipt is made by placing a stamp in a membership book.

Punishment and fines are provided for fraud, but no instances of fraud were discovered in 1927, 1928, and 1929. In 1930 there were four cases in the Canton, amounting to a total sum of 358 francs (\$69.09).

Machinery for the adjustment of disputes and grievances is provided through a special commission. Complaints and grievances on the part of members must be presented in writing.

According to the manager of the cantonal unemployment insurance office, the receipts and expenditures of the cantonal unemployment insurance fund in 1930 were as follows:

TABLE 16.—RECEIPTS AND EXPENDITURES OF CANTONAL UNEMPLOYMENT INSURANCE FUND OF SOLOTHURN, 1930

[Conversions into United States currency on basis of franc=19.3 cents]

Item	Swiss currency	United States currency
<i>Receipts</i>		
Interest.....	8,000	\$1,544
Premiums.....	122,000	23,546
Subsidies:		
Municipal (voluntary).....	26,000	5,018
Cantonal.....	116,000	22,388
Federal.....	170,000	32,810
Total.....	442,000	85,306
<i>Disbursements</i>		
Benefits paid out.....	365,000	70,445
Surplus.....	77,000	14,861

The cost of administration, amounting to approximately 42,000 francs (\$8,106) annually, is borne by the cantonal government.

An attempt was made to base contributions and benefits on actuarial calculations, such as those established by Professor Mangold of Basel, but the present economic crisis, which has particularly affected the watch industry, overthrew all such calculations.

#### Canton of Thurgau

THE basic law of the Canton of Thurgau was passed by the legislature December 30, 1930, and adopted by popular referendum February 8, 1931. Naturally, no statistics of importance covering the Canton have as yet been collected by the labor department, but it is estimated that there are about 30,000 workers in the Canton who will be affected by the law, most of whom are already insured in factory-system or trade-union funds.

The law provides for the establishment of a public cantonal unemployment insurance fund. There are the usual provisions adopted by other Cantons having compulsory insurance systems as to the classes of workers which are exempted. The ages at which insurance must be taken are from 16 to 65 years.

The cantonal subsidy is set at 30 per cent of the amount of benefits paid, and can be given alike to both public and private organizations.

#### Canton of Ticino

THE law of the Canton of Ticino regarding unemployment insurance was passed on November 25, 1929. It has the usual features prescribed by the Federal law regarding the length of time benefits may be paid, namely, 90 days in each 360-day period. However, due to the existing crisis, benefits have been paid to the unemployed in a few trades for from 120 to 150 days continuously.

The Canton has no public insurance organization of its own, but the law provides for cantonal subsidy for all public, private, or mutual insurance funds.

The amount of the cantonal subsidy is set at 10 per cent of the amount paid by the funds in benefits, which may be increased in time

of crisis to 15 per cent. To become eligible for unemployment benefits, members must have paid in at least 26 weekly contributions, as specified by the Federal law.

The control of the operation of the various insurance organizations is vested in the cantonal labor office, which has power to settle all disputes between members and their insurance groups, and to punish all cases of fraud. There are no changes in the law now anticipated.

There are no statistics available regarding the number of active members of insurance groups, nor of the number who have availed themselves of insurance benefits.

#### Canton of Uri

THE Canton of Uri passed its unemployment insurance law on September 29, 1928, setting up a compulsory system similar to that of most of the other Cantons having compulsory systems. Uri is an agricultural Canton, and there are only about 250 workers who are required to take out insurance. About 20 workers are now (1931) receiving benefits, most of them weavers.

The Canton has its own public fund, and contributed 20,000 francs (\$3,860) to this organization to set up a reserve fund, which it is hoped will grow large enough to enable contributions to be reduced.

No changes in the basic law are contemplated at the present time.

#### Canton of Valais

UNEMPLOYMENT insurance is regulated in the Canton of Valais by the law of January 11, 1928, adopted by popular vote on March 11, 1928, and put into execution April 17, 1928.

The Canton grants to both public and private funds a maximum subsidy of 30 per cent of the unemployment benefits paid, and to the workers' funds a maximum of 10 per cent.

The cantonal council votes the credit destined each year for the subsidy to the insurance funds. If the credit is not entirely used, the balance serves to enrich a cantonal reserve fund to be drawn against only in time of severe crisis.

The communes, either separately or in groups, are permitted to create public funds, and if they do so they may require the cantonal council to decree unemployment insurance as compulsory for certain classes of workers domiciled in the communal territory.

These communal funds are empowered to demand from each employer a contribution equal to that paid by workmen employed by them. If the worker belongs to a public fund, the employer's contribution must be paid to that institution, but if the worker belongs to a private or factory-system fund, the employer is permitted to make his contribution to that fund.

Insurance funds of every kind are exempt from all taxes except the cantonal real-estate taxes.

#### Canton of Vaud

THE unemployment insurance act of the Canton of Vaud was passed on November 27, 1928, and became effective on December 28, 1928. It does not make insurance compulsory, and in common with most of the other voluntary types of cantonal laws, it authorized each municipality or commune in the Canton to pass obligatory insurance regu-



lations should it so desire. To date, the only municipality which has passed even voluntary regulations is the commune of Vevey.

Any person of Swiss nationality domiciled in the Canton for at least a year and working for wage or salary is entitled to insurance against unemployment after reaching the age of 16 years. The usual exceptions to the classes which could be required by communal laws to take out insurance are included in the law, and cover persons earning more than 6,000 francs (\$1,158) per year, or possessing property amounting to 20,000 francs (\$3,860) or more. Federal, cantonal, and municipal employees, employees of licensed transportation companies and apprentices, domestic servants, day laborers, and seasonal workers are also excepted.

The cantonal subsidies may be granted to either public or private insurance organizations, and are equal to 50 per cent of the Federal subsidies, or 20 per cent of all payments made by public insurance funds and factory-system funds, but only 15 per cent of the payments made by trade-union funds.

The regulations concerning length of time benefits may be paid, the percentage of the normal wage to be paid in benefits, and the number of payments which must be made before benefits can be drawn, are in accordance with the Federal law.

All disputes between insurance groups and their members are first submitted to an arbitration board in the case of factory-system funds and to a central committee in the case of trade-union funds. The cantonal legislature has final jurisdiction over disputes of this character.

To date there are but seven members of the only public fund in the Canton, that of Vevey, while there are 5,564 members of trade-union funds and 4,402 members of factory-system funds. During the year 1930 there were 674 cases of unemployment in which benefits were paid for a total period of 17,448 days, or an average of 25.88 days of unemployment per person. The cost of the relief amounted to 14,220 francs (\$2,744).

No changes in the present law are contemplated, and it may be said that the feeling in this Canton is general against any form of compulsory unemployment insurance.

#### Canton of Zurich

THE law governing the operation of the cantonal and communal funds in the Canton of Zurich was passed by the legislature January 30, 1928, and adopted by referendum of the voters in May of the same year.

The principal features of the law are as follows: The Canton allows a subsidy to both public and private funds equal to 25 per cent of the amount paid yearly as benefits to residents of the Canton. As a rule these payments are made annually at the end of the fiscal year, but in case of special requests, advances for each half of a fiscal year may be made.

No subsidies are granted except to those funds which have met all the conditions necessary to obtain Federal aid. In addition the cantonal legislature made some special conditions, such as the following: Members of funds who are not heads of families or who have no dependents must pay the same contributions as members having

dependents, if they are in the same salary class. When the daily wage exceeds 16 francs (\$3.09) per day, whatever is in excess of this maximum is not included in the basis on which benefits are paid. Decisions as to claims for benefits made by public funds may be reviewed by higher communal or cantonal labor authorities, but differences between private funds and their members must be settled by the ordinary courts.

The different political subdivisions or communes of the Canton may also grant subsidies, but only to those funds which have previously been approved by the Canton, and all of them must be treated on an equal basis.

Any commune may make unemployment insurance obligatory, either for all workers, or for certain classes of workers, or for persons whose salary does not reach a certain maximum.

Those communes introducing compulsory insurance are required, however, either to create a public fund or to join a public fund operated by another commune. Groups of communes are permitted to unite for the purpose of instituting a public fund. The cost of administration must in such cases be borne by all the communes on a pro rata basis.

Employers of insured labor are required to render exact information to the funds of which their employees are members regarding the causes of discharge, and at the same time to notify public and private employment offices of any vacant positions they may have to offer. They are allowed liberty to choose any applicants whom they desire from among those who may apply for the positions.

All unemployment insurance funds recognized by the Canton are exempt from cantonal and communal taxation.

A special fund for extraordinary crises amounting to 500,000 francs (\$96,500), which is being increased by the interest thereon and which may be further increased by additional contributions from the Canton, has been set up. It may be drawn upon by any approved fund in time of need.

Various communes have taken advantage of the law to organize public funds. The largest is that of the city of Zurich, which is affiliated with several communes which are in reality suburbs of the city. The second largest communal public fund is that of the city of Winterthur. Both of these cities grant subsidies both to their own public funds and to private funds, varying from 30 to 50 per cent of the yearly total benefits paid.

Exact statistics regarding the operation of the system on a cantonal basis are not published, but certain figures in the report for 1929 (the latest) are given below.

At the end of 1929, there were in round numbers 50,000 members of public and private insurance groups. The number of recognized funds in operation in the Canton was as follows:

Public funds:	
1928.....	2
1929.....	2
Private trade-union or workers' funds:	
1928.....	25
1929.....	24
Private mutual or factory-system funds:	
1928.....	5
1929.....	7

Forty-five communes are represented in the system regularly, and these pay subsidies as follows: 7 communes pay each 40 per cent of the benefits; 14 pay 35 per cent; 13 pay 30 per cent; 1 pays 25 per cent; 8 pay 20 per cent; 2 pay 15 per cent.

At the end of 1929 the capital investments and guaranties of the various communes and the reserves of the cantonal fund itself reached a total of 1,074,796 francs (\$207,436).

#### Canton of Zug

AN unemployment insurance law for the Canton of Zug was passed by the legislature October 13, 1927, and put into execution January 7, 1928. Regulations for the carrying out of the law were set up on December 16, 1929.

The carrying of unemployment insurance is obligatory for all workers from 16 to 65 years of age who are employed by concerns subject to the control of the Federal factory-inspection service, and the law has made provision for extending the compulsion to other classes of workers should it be deemed wise.

The Canton set up its own public insurance fund, open to workers who do not come within the classes required by law to take out insurance, and guaranteed to the fund 20 per cent of the yearly benefit payments, which is automatically increased to 30 per cent in times of need. The costs of organization and administration are also borne by the Canton.

In connection with the cantonal public fund there is a bureau of arbitration which has full power to regulate any disputes arising between the fund and insured workers.

The same subsidy which is paid to the cantonal public fund is paid to private funds of both kinds which have been recognized by the Federal Government.

The members of the public fund must pay regularly a contribution of 6 per cent of the normal wage. All employers of labor who are compelled to carry insurance must pay an annual contribution of 6 francs (\$1.16) for each person, whether they be insured in the public or in private funds.

Benefits are paid for the term set forth in the Federal law, namely 90 days in each 360, and consist of 50 per cent of the daily wage in the case of members having no dependents, and 60 per cent to those supporting families. The highest rate of daily benefit, however, is not to be more than 8 francs (\$1.54) unless the worker has four or more minor children, when it can be increased to 10 francs (\$1.93).

The provisions for part-time unemployment benefits are the same as those set forth in the Federal law.



### Revenues Derived Under State Labor Laws

By EDWIN E. WITTE, CHIEF WISCONSIN LEGISLATIVE REFERENCE LIBRARY

THE term "revenues" as here used includes all receipts other than from general taxes, whether these receipts are appropriated to the State labor department or used for general State purposes. The term "labor laws" includes all statutes which are regarded as falling within the scope of labor legislation in such textbooks as Principles of Labor Legislation, by Commons and Andrews. This includes the workmen's compensation laws, even where administered by an industrial accident board distinct from the State labor department, and labor laws administered by departments whose main duties are in other fields. On the other hand, little note is taken of those activities of labor departments which in most States are performed by other departments, such as bakery and hotel inspection, steamboat inspection, the licensing of various professions, the certification of bedding and upholstery, and the enforcement of weights and measures laws.

#### Sources and Amounts

WHILE only a few labor departments are entirely self-supporting some revenues are derived from the administration of labor laws in most States. The table following gives the sources and amounts of principal revenue receipts in connection with the administration of labor laws in all States (excluding premium receipts of State funds) for which recent information could be secured through a questionnaire addressed to the labor departments or from State auditors' or budget reports.

PRINCIPAL REVENUE RECEIPTS FROM STATE LABOR LAWS

State and department	Source of revenue receipts	Amount (in fiscal year 1930 unless otherwise specified)
Arkansas: Bureau of Labor Statistics	Boiler inspection fees	\$23, 221
	Employment agency licenses	
California: Department of Industrial Relations	Premium tax on State compensation insurance fund	211, 126
	Employment agency licenses	32, 990
	Elevator inspection fees	6, 630
	Boiler inspection fees	7, 296
	Fines and civil penalties	5, 132
	Sale of publications, etc.	4, 476
Colorado: Bureau of Labor Statistics	Employment agency licenses	2, 100
Connecticut: Department of Labor	Employment agency licenses and boiler inspection fees	4, 027
Delaware: Industrial Accident Board	Premium tax on compensation insurance companies and self-insured employers.	19, 450
Georgia: Industrial Commission	Assessment of departmental expenses to insurance carriers and self-insured employers.	1 65, 795
	Transcripts of evidence	1 421
Idaho: Industrial Accident Board	Payments in fatal cases without dependents and in alien dependency cases under compensation act.	20, 665
	Transcript fees	248
Illinois: Industrial Commission	Employment agency licenses	22, 500
	Writs of certiorari, compensation cases	766
Indiana: Industrial Board	Annual factory registrations	2 15, 042
	Transcript fees	2 1, 765
Iowa: Employment Agency Commission	Employment agency fees	815
Kansas: Department of Labor and Industry	Employment agency fees	2 294
Kentucky: Workmen's Compensation Board	Premium tax on compensation insurance carriers and self-insured employers.	1 113, 387

<sup>1</sup>Year 1928.

<sup>2</sup>Year 1929.

## PRINCIPAL REVENUE RECEIPTS FROM STATE LABOR LAWS—Continued

State and department	Source of revenue receipts	Amount (in fiscal year 1930 unless otherwise specified)
Maryland: Industrial Accident Commission.....	Assessment administration expenses against State fund, insurance carriers, and self-insured employers.	\$110,789
Court of Common Pleas, Department of Labor Statistics.	Employment agency licenses.....	594
	Boiler inspection fees.....	1,550
	Fees for theatrical child labor permits in Baltimore.....	160
Massachusetts: Department of Industrial Accidents.	Reimbursement by insurance carriers for cost of impartial medical examinations.	27,640
Department of Public Safety.....	Boiler and air tank inspection fees.....	55,867
Michigan: Superintendent Private Employment Bureaus.	Private employment agency licenses.....	12,307
Department of Labor.....	Public employment office fees.....	606
Minnesota: Industrial Commission.....	Boiler inspection and engineer's license fees.....	<sup>3</sup> 51,649
	Employment agency fees.....	7,125
Mississippi: Bureau of Factory Inspection.....	Factory registration fees.....	<sup>2</sup> 7,200
Missouri: Department of Labor.....	Factory inspection fees.....	42,000
	Employment agency licenses.....	3,200
	Certified bedding and upholstery.....	1,500
	Factory, mine, and boiler inspection fees.....	31,258
	Administration expenses paid from compulsory State compensation fund.	<sup>4</sup> 61,314
Montana: Industrial Accident Board.....	Engineers' and firemen's licenses.....	30,854
Nevada: Industrial Commission.....	Boiler inspection fees.....	8,851
	Employment agency licenses.....	8,575
	Licenses for storage of explosives.....	1,875
	Building plans.....	1,077
	Fines.....	992
	Inspection of bakeries and hotels.....	13,725
New Jersey: Department of Labor.....	Assessment administration of compensation act on insurance companies and self-insured employers.	1,431,061
	Expenses State fund paid from this fund.....	<sup>2</sup> 115,108
	Boiler inspection fees.....	21,510
	Licenses for storage of explosives.....	9,910
	Immigrant lodging house licenses.....	1,650
	Premium tax on compensation insurance companies and self-insured employers.	85,000
North Carolina: Industrial Commission.....	Administration expenses paid from compulsory State compensation fund.	61,282
North Dakota: Workmen's Compensation Bureau.	Boiler inspection fees.....	<sup>2</sup> 38,138
Ohio: Department of Industrial Relations.	Engineers' licenses.....	52,421
	Employment agency licenses.....	10,100
	Licenses for storage of explosives.....	5,714
Oregon: Bureau of Labor.....	Factory inspection fees.....	33,455
	Employment agency licenses.....	4,380
	Plumbers' and electricians' licenses.....	9,540
Industrial Accident Commission.....	Administration expenses paid from State compensation fund.	268,242
Pennsylvania: Department of Labor and Industry.	Boiler inspection fees.....	45,241
	Employment agency fees.....	26,910
	Elevator inspection fees.....	16,665
	Expenses of State fund paid from fund.....	.....
	Fines.....	5,415
	Certification of bedding and upholstery.....	53,876
	Boiler inspection fees.....	7,284
Rhode Island: Inspector of Steam Boilers.	Employment agency fees.....	8,360
Texas: Bureau of Labor Statistics.....	Premium tax on compensation insurance companies and self-insured employers.	135,000
Virginia: Industrial Commission.....	Administration expenses paid from State compensation fund.	254,974
West Virginia: Workmen's Compensation Department.	Employment agency licenses.....	712
Wisconsin: Industrial Commission.....	Boiler and elevator inspection fees.....	5,361
	Licenses, dry-cleaning establishments.....	1,695
	Age certificates under child-labor law.....	1,541
	Transcript fees.....	1,700
Wyoming: Workmen's Compensation Department.	Administration expenses paid from State compensation fund.	17,667

<sup>3</sup> Biennium 1929-30.<sup>4</sup> Biennium 1926-1928.

## Revenues Under Workmen's Compensation Acts

THE largest revenues in the administration of labor laws are derived under the workmen's compensation acts. No fewer than 13 States pay all expenses connected with the administration of compensation from revenues derived under these acts, without drawing upon the general funds of the State. Three States assess the entire administration expenses to the compensation insurance carriers and self-insured employers—Georgia and Maryland on a premium basis and New York in proportion to their respective compensation payments. Four States meet the expenses of their compensation departments by premium taxes on the insurance carriers and the self-insured employers, the rate of which is 4 per cent in Delaware, 2 per cent in Kentucky,  $2\frac{1}{2}$  per cent in North Carolina, and  $2\frac{1}{2}$  per cent ( $3\frac{1}{2}$  per cent prior to July 1, 1930) in Virginia. An eighth State, Idaho, supports its industrial accident board by requiring \$1,000 to be paid into the administration fund in all fatal cases in which there are no dependents and one-half of the compensation benefits where the dependents are aliens. Finally, there are five States which pay all expenses of administering their compensation acts from the premium income of their compulsory State compensation funds: Nevada, North Dakota, Oregon, West Virginia, and Wyoming.

States having optional State funds invariably make these funds pay their own special expenses, but generally do not require them to pay any part of the general expenses of the department. Maryland and New York, however, make their State funds pay their proportionate part of the expenses of the administration of the compensation law, on the same basis as insurance carriers and self-insured employers, while California goes farther and makes the State fund pay the same tax for general State purposes which private insurance carriers must pay.

Other sources of revenue under compensation acts are much less important. Many States charge fees for transcripts of testimony and other records furnished to insurance carriers and others on their request. Massachusetts requires the insurance companies and self-insured employers to reimburse the industrial accident department for the cost of impartial medical examinations in cases in which these companies and employers are interested. Missouri authorizes charging the cost of investigating applications for self-insurance upon the employers filing these applications, but no such charge has ever been collected.

## Factory-Inspection Fees

FIVE States—Indiana, Mississippi, Missouri, Montana, and Oregon—make employers pay all or a part of the cost of factory inspection; Michigan has authorized its labor department to make such a charge, but it has never done so. Indiana, Mississippi, and Oregon require all factories to pay annual registration fees, graduated in accordance with the size of the factory. Missouri and Montana charge a similar fee whenever factories are actually inspected. As compared with the receipts under the compensation acts, the total amounts collected from factory inspection fees are small, but in all of the States having such fees (except Indiana) the entire expenses of



factory inspection are paid from such receipts. All of these laws are old enactments, and Washington and Tennessee, which formerly had such fees, repealed them some years ago. Recommendations for repeal have several times been made by the Indiana Industrial Board but have not been followed by the legislature.

### Boiler-Inspection Fees

A MAJORITY of the States require all boilers to be inspected annually or semiannually. These inspections are most commonly made by the boiler insurance companies, which file their inspection reports with the State department and in many States must secure licenses ("certificates of competency") for all of their inspectors.

Nearly all States which require boiler inspection charge a fee for all (uninsured) boilers inspected by State inspectors. In addition, a few States charge fees for boilers inspected by the insurance companies and make a charge for certificates of competency issued to insurance company inspectors. The boiler-inspection fees charged in the several States are as follows:

*Arkansas.*—\$3 to \$7.50.

*California.*—External inspection, \$2 to \$5; internal inspection, \$3 to \$15; air-tank inspection, \$3.

*Colorado.*—\$5.

*Connecticut.*—External, \$2.50; internal, \$7.50.

*Maryland.*—\$5, plus 25 cents per horsepower in excess of 10 horsepower.

*Massachusetts.*—External, \$2; internal, \$10; cast-iron sectional boilers, \$5; air-tank inspection, \$3; certificate of competency, \$15.

*Minnesota.*—\$3.

*Montana.*—Boilers in cities, \$5; boilers and traction engines outside of cities, \$10 for first boiler, \$5 for each additional boiler.

*New Jersey.*—Annual State inspection, \$6 plus expenses; reinspection during year, \$2 plus expenses; inspection by insurance inspectors, \$1.

*New York.*—External, \$2; internal, \$5.

*Ohio.*—External, \$2; internal, \$5; inspection during construction, \$10; annual certificate for operation of insured boiler, \$1; fee for examination for certification to act as boiler inspector, \$10.

*Pennsylvania.*—External, \$2.50; internal, \$6.50; annual certificates for operation of boiler, \$1; certificate of competency—Examination fee, \$15; additional fee on passing examination, \$10; annual renewal fee, \$3.

*Rhode Island.*—Boilers under 3 horsepower, \$2.50; boilers of 3 horsepower or more, \$5; annual certificate for operation of boiler, \$1; certificates of competency—Examination fee, \$5; permit fee for inspectors who passed examination in another State, \$2.50.

The receipts from boiler-inspection fees are quite considerable in a number of States, amounting, in round numbers, to \$55,000 per year in Massachusetts, \$45,000 in Pennsylvania, \$38,000 in Ohio, and \$25,000 in Minnesota. In most States, however, the fees collected are not sufficient to meet all expenses of the boiler-inspection divisions. It is practically impossible to make the inspection of uninsured boilers pay for itself, because these boilers are widely scattered and generally located in out-of-the-way places. Only where a system of licensing engineers is combined with boiler inspection, as in Minnesota, New Jersey, and Ohio, or where a fee is charged for boilers inspected by the insurance companies, as in New Jersey, Ohio, Pennsylvania, and Rhode Island, is there any prospect of receipts equaling expenses. A charge of \$1 per year for each insured boiler, collected either from the insurance companies, when they file their in-

spection reports with the State department, or from the boiler owners, for an annual certificate or license to operate their boilers, is far more productive of revenue than even a \$10 fee for the inspection of uninsured boilers.

#### Other Inspection Fees

ELEVATOR-inspection fees are charged in three States. California and Wisconsin collect fees of \$3.50 and \$2, respectively, for each elevator inspected by a State inspector. Pennsylvania charges \$1 for each certificate issued after inspection by an insurance company and taxes each insurance inspector \$10 as an examination fee, \$5 additional when he receives his certificate of competency, and \$3 for the annual renewal of this certificate.

Annual licenses for the storage of explosives are required in New Jersey, New York, and Ohio. The fees in all these States are graduated in accordance with the quantity of explosives stored, the minimum fee being \$1 in New Jersey and Ohio and \$5 in New York, with \$25 as the maximum fee in all three States.

Annual license fees, designed to cover costs of inspection, are charged dry-cleaning establishments in Wisconsin, manufacturers of bedding and upholstering in Missouri and Pennsylvania, bakeries in New Jersey, hotels in New Jersey, and plumbers and electricians in Oregon.

#### Private Employment-Agency License Fees

THE licensing of private employment agencies is a source of revenue to the State governments in 33 States. The annual fees charged for such licenses are as follows:

<i>Alabama.</i> —\$5,000 (emigrant agents).	<i>Nebraska.</i> —\$50.
<i>Arkansas.</i> —\$200.	<i>Nevada.</i> —\$50.
<i>California.</i> —\$10 to \$100.	<i>New Jersey.</i> —\$25 to \$100.
<i>Colorado.</i> —\$10 to \$50.	<i>North Carolina.</i> —\$100 to \$500, employment agencies; \$500 per county, emigrant agents.
<i>Connecticut.</i> —\$25.	<i>Ohio.</i> —\$100.
<i>Georgia.</i> —\$1,000 (emigrant agents).	<i>Oklahoma.</i> —\$50.
<i>Illinois.</i> —\$25 to \$50.	<i>Oregon.</i> —\$50 to \$250.
<i>Indiana.</i> —\$50.	<i>Pennsylvania.</i> —\$100 to \$200.
<i>Iowa.</i> —\$5 to \$500.	<i>South Dakota.</i> —\$10.
<i>Kansas.</i> —\$10 to \$25.	<i>Tennessee.</i> —\$10 to \$50.
<i>Kentucky.</i> —\$25.	<i>Texas.</i> —\$150, employment agencies; \$1,000, emigrant agents.
<i>Louisiana.</i> —\$25, regular offices; \$500, agents without offices.	<i>Virginia.</i> —\$25, regular offices; \$500, agents without offices; \$5,000 per county, emigrant agents.
<i>Maine.</i> —\$25.	<i>West Virginia.</i> —\$200, employment agencies; \$5,000, emigrant agents.
<i>Maryland.</i> —\$10.	<i>Wisconsin.</i> —\$25 to \$150.
<i>Michigan.</i> —\$50 to \$200 (also a permit fee of \$5 for employment offices not conducted for profit).	<i>Wyoming.</i> —\$10 to \$25.
<i>Minnesota.</i> —\$75 to \$150.	
<i>Missouri.</i> —\$25 to \$50.	
<i>Montana.</i> —\$5.	

Where a range of fees is indicated, there are different fees for different classes of agencies and for the varying sizes of cities in which they operate. The highest fees are invariably charged agencies located in the larger cities, and generally the agencies specializing in the better-paid kinds of work, such as the teaching and clerical employments, but there are some States in which the highest fees are collected from common-labor agencies. The especially high fees charged in Southern States to emigrant agents, who seek to take labor out of the

State, are, of course, intended to be prohibitive rather than revenue producing. Elsewhere the private employment-agency fees serve both the purpose of producing revenue and that of keeping down the number of such agencies. The latter motive appears to have become more pronounced in recent years, as there is a distinct tendency toward an increase in fees. More than a dozen States have increased their private employment-agency fees within the last five years, many of them very materially.

On the adequacy of the present fees, little statistical data are obtainable, because only a few State labor departments have separate private employment agency divisions. In Illinois, which has such a division, expenses slightly exceed revenues, but no other State has anywhere near as large a staff of employees engaged in this work. Except for Illinois and perhaps some of the States having very low fees, it is probable that the total fees collected exceed the costs of regulation.

### Miscellaneous Revenues

OTHER SOURCES of revenue in connection with the administration of labor laws are relatively unimportant. The child labor law yields a small sum to the labor departments of two States: Maryland, which charges a fee for the issuance of theatrical permits in Baltimore; and Wisconsin, which makes employers pay for age certificates issued at their request to children above permit age.

The approval of building and ventilation plans produces over \$1,000 per year in New Jersey. The approval of building plans outside of cities having their own building inspectors is a function of the labor departments also in a number of other States, but no charges are made therefor, although city departments do so everywhere.

Michigan is the only State which has experimented with a charge in connection with the services of public employment offices. In 1927 it authorized a \$1 annual registration fee from applicants for work. Very little revenue was derived from this charge and Commissioner Brock, who seems to have been its author, explained that it was not intended to produce revenue but to gain a better clientele for the employment offices. His successor discontinued the charge in January, 1931.

Finally, fines and forfeitures for violations of labor laws might be regarded as a source of revenue derived from labor laws. Their aggregate amount, however, is small; in many States they do not go into the State treasury; and in only a few States are they appropriated to the labor departments.

### Conclusions

A COMPARISON of the revenue receipts derived from the administration of labor laws, as given in the table, with the corresponding table in the earlier article on the same subject published in the *Monthly Labor Review* of April, 1930, shows few new sources of revenue in the last two years, but larger receipts from practically every source except private employment-agency fees. The revenues derived from the administration of labor laws pay all or a large part of the expenses of the industrial accident boards and other labor departments in about 15 States and amount to a substantial sum in a dozen more.



State governments generally and State labor departments in particular are experiencing great difficulty in getting sufficient funds to discharge their functions efficiently. There is great need for increased appropriations to the labor departments; but under existing conditions legislatures are very reluctant to vote such increases from general revenues. This renders timely a consideration of possible new and supplemental sources of revenue. In the past, labor departments have generally taken the attitude that it is no concern of theirs where the revenues they need may come from. Theirs was the spending of the appropriations which others were to provide. To-day such an attitude inevitably means little or no increases, and appropriations are perhaps the most serious limiting factor in labor law administration. In this situation, it is clearly the duty of the labor departments, as of other administrative departments, to consider possibilities for deriving revenues from the laws they administer. Discovery of sources of revenue which are equitable and productive is almost certain to make increased appropriations easier to obtain, even in States where under the existing budget procedure receipts are not reappropriated. Whether the revenues from such special sources are appropriated to the labor departments or not, the fact that they are derived through their activities is almost certain to make the legislature more amenable to pleas for increased appropriations.

Of all possible sources of revenue in labor law administration the most productive and most easily defended proposal is the assessment of the costs of administering the workmen's compensation act on the insurance carriers and self-insured employers or, in lieu thereof, the imposition of a premium tax on compensation insurance and an equivalent charge to the self-insured employers, the proceeds of which go for the administration of the compensation law. The cost of administration is as much a part of the total cost of compensation as are medical aid, indemnity, and the overhead expenses of the insurance carriers. Payment by the State of the cost of administration actually amounts to a subsidy to industry at the expense of the general taxpayers.

It is true that the compensation insurance carriers in most States pay taxes in excess of the cost of administering the compensation act and that self-insured employers pay property and in some States income taxes. Such taxes, however, serve purposes of general State revenue and presumably do not exact more from the insurance carriers and self-insured employers than their fair share of the general State expenses.

Nor will an increase in the premium taxes payable by the compensation insurance companies meet the situation, although it could be made to yield as much revenue. For one, the industrial accident boards would not get the advantage of the increased revenue and, further, the entire burden would fall upon the insurance companies and through them on the insured employers, while the self-insured employers would escape paying their proportionate share of the cost of administering the workmen's compensation act.

The writer would go farther and assess upon the compensation insurance companies and the self-insured employers not merely the costs of administering the workmen's compensation acts but the costs

of all accident-prevention work done by labor departments as well. No State has done so, but the same result is produced in the compulsory fund States which make these funds pay for the safety work carried on by the industrial accident boards. The accident-prevention activities of labor departments, if efficient, benefit the employers subject to the compensation acts, who may well be asked to pay for this service.

Assessing the costs of the compensation and safety departments or divisions to the compensation insurance companies and the self-insured employers may be thought to invite extravagance, but the opposite is more likely to be the effect. When employers know that the administration costs are charged against them they are very apt to demand real efficiency in labor-law administration and, if this is not thought sufficient protection, limits upon the total expenditures may be inserted by law.

Assessment of the cost of accident-prevention activities on the employers in proportion to the compensation benefits they pay seems preferable to the imposition of factory-inspection fees. There is value in an annual registration of all factories, but the charging of a fee based upon the size of the factory is likely to render the labor department extremely unpopular among the employers.

Boiler and elevator inspection fees are likewise unpopular with employers, but have the justification that they represent a highly specialized service. Employers who do not insure their boilers or elevators may reasonably be expected to pay the full cost of inspection; otherwise, they are given a special service at the expense of the taxpayers, including the owners of insured boilers who pay the full cost of the inspection of their own boilers. If this principle is adopted, the fees charged for the inspection of uninsured boilers will in most States have to be materially increased, as the present fees fall far short of covering the cost. A small fee for boilers inspected by insurance companies can also be justified on a cost basis and has the merit of yielding a very considerable revenue.

The charging of annual license fees to private employment agencies is so nearly universal that it needs no defense. Such fees should as a minimum be high enough to pay all expenses of supervision, and if they tend to reduce the number of agencies this is clear gain.

Other sources of revenue in connection with labor-law administration are less well developed and will not be further discussed. While none is now very productive, labor departments may find some to be advisable from every point of view. What is urged is that finding sources of revenue is a matter of real importance, to which labor departments may well give attention.

# UNEMPLOYMENT AND ITS RELIEF

## Conference of Governors' Commission for Study of Unemployment Insurance

ON MAY 28, 1931, the organization meeting of the Commission for the Study of Unemployment Insurance was held in New York City. This body was appointed as an outcome of the conference of seven governors which met in Albany in January of this year at the invitation of the Governor of New York.<sup>1</sup>

Various angles of the unemployment problem and unemployment insurance were discussed by the new commission.<sup>2</sup> The New York State Industrial Commissioner, in whose office the commission met, made a brief address in which she touched upon the need for establishing an unemployment insurance system responsive to the country's requirements and for making possible the retention of the best features of American business and industrial organization.

The seven members of the commission, all of whom were in attendance at this first meeting, are—

Dr. Leo Wolman, of Columbia University, representing Governor Roosevelt; A. Lincoln Filene, representing Governor Ely, of Massachusetts; Prof. W. M. Leiserson, of Antioch College, representing Governor White, of Ohio; Col. Charles R. Blunt, commissioner of labor, representing Governor Larson, of New Jersey; Prof. C. A. Kulp, of the University of Pennsylvania, representing Governor Pinchot, of Pennsylvania; Prof. Eliot D. Smith, of Yale University, representing Governor Cross, of Connecticut; and Commissioner Daniel McLaughlin, representing Governor Case, of Rhode Island.

Subcommittees were designated to study particular aspects of unemployment insurance. Public hearings are to be held upon the findings which will be submitted the latter part of this summer.

The subjects assigned to the various members of the commission are listed below:

Essential features of a sound unemployment insurance plan, A. Lincoln Filene, Boston, and Eliot D. Smith, Connecticut.

Cost of various plans of unemployment insurance, Professor Kulp, Pennsylvania.

European experience with unemployment and unemployment insurance, Professor Leiserson, Ohio, and Doctor Wolman, New York.

American experience with unemployment and unemployment insurance—(a) Prevailing methods of dealing with unemployment, Doctor Wolman; (b) Unemployment bureaus and vocational education, Commissioner Blunt, New Jersey, and Professor Leiserson; (c) Prevailing experiments with unemployment insurance, Doctor Wolman; (d) Proposed unemployment insurance bills, Professor Leiserson and Doctor Wolman.

## Vocational Education As a Means to Relieve Unemployment

THAT vocational training as carried on under the national vocational education program can be utilized to relieve unemployment caused by the introduction of new machinery, operations,

<sup>1</sup> See Labor Review, March, 1931, p. 64.

<sup>2</sup> New York Times, New York, May 29, 1931, p. 23.



and processes in industry, is the opinion of Dr. J. C. Wright, director of the Federal Board for Vocational Education. In expressing this opinion, he stresses the necessity of anticipating these industrial changes far enough in advance so that men who are destined to be displaced by them may be retrained for other types of work. To this end, he urges that employers and workers cooperate in keeping vocational schools informed of new jobs for which workers should be trained, for only in this way will the schools be able to play their part most effectively in relieving technological unemployment.

Doctor Wright's statement is given below:<sup>1</sup>

"In advocating a plan of vocational training for workers displaced by industrial changes, I am not following a theory. I can point to specific instances which demonstrate the feasibility of such a plan. I wish it to be understood, also, that I am not advocating following any set program in carrying out the plan. It is possible, for instance, for those who have been displaced through technological changes in industry to be vocationally trained for other jobs through their labor unions, in courses set up by employers or by State or local educational services, in intensive courses operated by public schools, and in special or 'opportunity' courses. The effectiveness of the training and not the particular training agency is what counts.

#### How a Group of Truck Drivers Met a Technical Change

"Not long ago the business agent of the local union of truck drivers in New York City was informed by the president of a large coal company that within six months the company proposed to change from horse-driven to motor-driven trucks. With this information in hand the business agent presented the problem to the members of the union at their next meeting. Confronted with the possibility of losing their jobs, the members of the union purchased a 3-ton Mack truck and employed a competent instructor to teach them how to drive motor trucks, and how to make emergency road repairs. This instruction was given to the men during their leisure time in the evening, and before the six months had elapsed every one of these drivers had been able to secure his driver's license.

"Six months later, when the president of the company expressed regret that it would be necessary to let off the drivers of horse-driven trucks and employ licensed operators of motor-driven trucks, the business agent informed him that every one of the men now in his employ was a competent and licensed motor-truck driver. He also called the president's attention to the fact that these men knew the company's business and the company's customers, and that they had been found through many years of experience to be loyal to the company's interests—assets which new men could not possibly possess. This information was all that was necessary to enable these men to retain their jobs.

#### A Company Training Scheme

"A FEW weeks ago I visited a rubber company in New England. I found that the company had organized its own training department and that this department was responsible not only for the

<sup>1</sup> From Federal Board for Vocational Education, press release of Mar. 4, 1931.

training of new employees, but also for the retaining of those employees whose jobs were discontinued by reason of the introduction of new machines, processes, or methods. The training department was kept advised of proposed changes and therefore was in a position to transfer the employees affected by these changes to other departments, and to train them in the new skills, operations, and technical information required by these jobs. On the occasion of my visit to this plant I was accompanied by two representatives of the State board for vocational education, which had been requested to assist the training department in the training of teachers.

#### State Action in Averting Technological Unemployment

"ONE of the most striking examples of the retaining for new jobs of workers whose jobs were threatened by industrial change is reported from New Jersey.

"When a large railroad company decided to electrify its tracks in that State it faced the problem of finding competent engineers for its electric locomotives. Instead of turning out its steam locomotive engineers, the company, with the assistance of the State board for vocational education, which furnished a competent instructor, trained its locomotive engineers and firemen to be experienced electric locomotive operators, while the electrification of its tracks was in process. Latest reports are that this program has been carried through satisfactorily.

#### The Part of the Public Schools

"I AM informed by the State supervisor of trade and industrial education for the State of Michigan that when countless numbers of machine operators were released and turned out of employment by the manufacturers of automobiles, during the depression of 1929-30, thousands of these unemployed came to the evening schools, and to some extent to the day schools, for vocational training. The majority of these workers had been taken into the automobile plants with little or no previous training and, under the direction of an instructor-foreman, had been taught to perform one or two very simple operations in the manufacture and assembly of automobiles. When it became necessary to reduce the force under the market conditions, the men and women who possessed little or no skill were first to be let out. As this fact dawned upon many of these workers, they realized that as insurance against unemployment it would be worth their while to go to school and equip themselves for doing more than one simple operation.

"During all this period of depression I am informed that there has been a great scarcity of tool and die makers in Ohio, Michigan, and other industrial States, and that there is also a great need for competent machinists. It requires several years, however, to become a highly skilled worker in the machinist trade, and the public schools in Detroit and other cities found it very difficult to adjust their programs to meet emergency demands in such overwhelming numbers. Had the need for machinists been anticipated, it would have been possible for the schools to have developed training courses and to have put those into operation in time to meet the demand for such workers.

### Opportunity Schools

"A NUMBER of cities now maintain what may be called 'opportunity schools.' The oldest and perhaps best organized is that located in Denver, Colo., which has grown up under the leadership of Miss Emily Griffith. Some 7,000 or 8,000 students attend this school each year, and few, indeed, have come to its doors with a specific need for training to help them get a job, keep their job, or get a better job who have not met with a ready response on the part of the school. A man or woman out of employment in the city of Denver can go to this school and be given short intensive instruction under a competent instructor for practically any new occupation.

### Importance of Cooperation of Employers, Workers, and Educators

"I CAN not emphasize too strongly the need for cooperation between the vocational school authorities and employers and workers. The province of the vocational school in relieving technological employment is to retrain for new jobs those who have been thrown out of employment. The employer can give the school authorities information on employment opportunities for which the school can train workers and can frequently provide equipment for this training which the school does not possess. The worker on the other hand knows the requirements of specific occupations, information which is invaluable to the school in setting up vocational courses. For the information and assistance it needs in setting up courses, therefore, the school must look to the employer and the employee groups."

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### Seasonal Employment During Vacation Periods in England

A DIFFICULT part of the work of the English employment exchanges is supplying suitable workers for hotels, boarding houses, shops, and other enterprises in resorts during the vacation season. As a rule, the need can not be met in full from the immediate neighborhood, and the exchanges are called upon to secure workers from a distance. Formerly it was possible to supply seaside resorts with the help they needed from near-by towns or villages, but as motor traffic has increased, catering services have been set up in the inland villages, so that now it is necessary to go farther afield to secure workers for the temporary and seasonal work offered.

To meet the need a system of cooperation has been worked out between exchanges by which the so-called "demand" areas are linked up with areas in which there is apt to be a supply of suitable applicants for employment, so that engagements can be made without delay. The Ministry of Labor Gazette, in its issue for May, 1931, gives some details as to the work done along this line.

The arrangements made include visits of the ministry's officers from the "demand" areas to specified "supply" areas, where the nature of the work is explained to workpeople, and the supply and type available are ascertained. Employers have gained confidence in engaging labor from other districts because of the first-hand information given by the exchanges as to the qualifications of workpeople; while a personal explanation of the general conditions of this employment has encouraged applicants to come forward.



The effectiveness of these arrangements is shown by the fact that 77.4 per cent of the vacancies notified in 1930 were filled, a total of 39,673 men, boys, women, and girls having been placed in seasonal employment at holiday resorts during that year. The number of women and girls placed in employment during the year was 31,439, an increase of 5,038 over the number in 1929. Of these women and girls, 12,838 were placed as resident domestics, 5,022 as nonresident domestics, 8,831 as waitresses, 1,880 as shop assistants, and 2,858 in other occupations. As regards the 8,234 men and boys placed, 3,419 went to resident domestic service, 799 to nonresident domestic service, and 1,435 became waiters.

Not all of these workers are brought from a distance, not quite half of the women and girls placed in 1930 having come from districts other than those in which they took employment, but, inevitably, the placing of the nonresident workers involves more care and responsibility than is required for those living near their place of employment. Lists of suitable inexperienced workers who are willing to take up this seasonal employment are prepared in advance, though it is usually found that employers will not take inexperienced workers until the season is well under way. The applicants are given full information about the particular place designed for each before they make the engagement. If necessary, they are helped to make the trip, a portion of the fare being remitted in appropriate cases; and welfare arrangements, which appear to be appreciated by both employers and workers, are made in the areas where employment is available. The work is growing in extent.

The number of seasonal vacancies for women and girls notified to employment exchanges during 1930 showed an increase of some 5,000 over the number in 1929; but nearly 76 per cent of the vacancies were satisfactorily filled, as compared with 73 per cent of the lower number of vacancies available in 1929. The proportion of actual placings to vacancies notified is affected by the cancellation of vacancies by employers who had overstated their requirements and by the failure of numbers of applicants for employment to take situations after their particulars had been submitted to, and accepted by, employers. The task can perhaps best be measured, however, by the fact that of 31,439 women and girls placed in seasonal employment, 14,061 were brought from other districts.

# EMPLOYMENT CONDITIONS

## Employment in Cincinnati in May, 1931

ACCORDING to a census made by the municipal authorities of Cincinnati, approximately 18 per cent of the working population in that city were unemployed in May, 1931. An additional 19 per cent were working on a part-time basis. The remainder, nearly 63 per cent, have steady full-time jobs. These are the most significant facts shown by the employment census just finished in Cincinnati.

The census, which was made possible through the cooperation of the board of education, and the division of public welfare for the permanent committee on stabilizing employment, was the result of a house-to-house survey made by the regular school census enumerators. Each year these enumerators take a census of the children of school age in Cincinnati. During the last three years, however, they have also collected data on employment and unemployment. The subcommittee on fact finding of the permanent committee on stabilizing employment was responsible for drawing up the employment schedule. It was also responsible for assisting the enumerators in collecting the data and tabulating the results.

The percentages of full-time and part-time workers, and of totally unemployed persons covered by the last three censuses are shown in the following table:

NUMBER OF PERSONS IN CINCINNATI EMPLOYED FULL TIME OR PART TIME AND WHOLLY UNEMPLOYED, AS SHOWN BY EMPLOYMENT CENSUSES OF 1929, 1930, AND 1931

Month of census	Per cent of persons—		
	Em- ployed full time	Em- ployed part time	Totally unem- ployed
May, 1929.....	88. 56	5. 27	5. 94
May, 1930.....	81. 89	9. 83	8. 28
May, 1931.....	62. 83	18. 85	18. 32

This table would indicate that even in May, 1929, when conditions were prosperous, nearly 6 per cent of Cincinnati's working population were unemployed. The second census, taken a year ago, showed that there was a considerable increase in the number of those totally unemployed and that the number of those working on a part-time basis was almost twice as large as it had been in the same month of the preceding year. The census this year indicates that there were more than three times as many unemployed this May as there were two years ago, and nearly four times as many working on a part-time basis.

The schedule used in each of these three censuses was practically the same, although there were minor improvements from year to year.

When an enumerator visited a home the first question asked was, "How many persons in this home are or would be working for wages or a salary, if work were available?" The enumerators were instructed not to include anyone under this question who was unemployed because of old age, illness, mental or physical handicaps. It is quite probable, however, that some of those listed under this group were actually unemployable, particularly in the first census. Nevertheless, it was felt that the question of whether a person was or was not actually employable ought to be left to the person involved rather than to the enumerator.

The second question was, "How many of these (listed under question No. 1) are working full time, how many are working part time, and how many are not working at all?" The part-time worker this year was defined as one not having a full-time job, but who was working at least one day a week.

The census this year covered 120,726 "employable" persons. According to the 1930 Federal census, Cincinnati has 203,030 persons having "gainful occupations." If the percentages shown in the employment census taken this year were applied to the total number shown by the Federal census, the results would show 37,212 persons were totally unemployed and that 38,271 were working on a part-time basis. The balance of 127,547 would have steady full-time jobs.

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### Unemployment in Philadelphia, April, 1931

THE following statement describing the results of the recent unemployment survey of Philadelphia was issued by the Wharton School of Finance and Commerce of the University of Pennsylvania, which cooperated in the making of the survey:

"From a preliminary count of a survey made in Philadelphia during the last three weeks of April, 1931, it appears that the amount of full-time employment had increased somewhat in that city as compared with midwinter; and further that, generally speaking, it had been the policy of employers to increase the working time of such forces as were kept on the roll from part to full time employment before hiring additional workers.

"According to the survey estimates, 25.6 per cent or 228,000 of Philadelphia's wage earners were totally unemployed; an additional 13.8 per cent or 123,000 were working part time; and 60.6 per cent or 539,000 were employed full time in April, 1931. These estimates are based on a preliminary hand count of a sample survey of unemployment made by the industrial research department of the University of Pennsylvania in cooperation with the Bureau of Compulsory Education.

"In the special census of unemployment taken in January, 1931, by the United States Bureau of the Census, 23.8 per cent or 212,051 of Philadelphia's wage earners were "out of a job, able to work, and looking for a job" (class A), and 3.9 per cent or 34,673 had jobs but were on lay-off without pay, excluding those sick or voluntarily idle (class B), making a total of 27.7 per cent or 246,724 wage earners wholly unemployed. In December, 1930, the Metropolitan Life Insurance Co. found in its sample survey of unemployment that



24.9 per cent of the wage earners were wholly unemployed and 24.0 per cent working part time.<sup>1</sup> If these percentages may be taken as representative of the city, it would appear that approximately 222,000 wage earners were totally unemployed and 214,000 were employed part time in December, 1930. The results of these two surveys and one census are summarized in the following table:

TABLE 1.—CHANGES IN UNEMPLOYMENT AND PART-TIME EMPLOYMENT OF PHILADELPHIA WAGE EARNERS, DECEMBER, 1930, TO APRIL, 1931

Date	Persons totally unemployed		Persons employed part time	
	Number	Per cent	Number	Per cent
December, 1930.....	<sup>1</sup> 220,000	24.9	<sup>1</sup> 214,000	24.0
January, 1931.....	246,724	27.7	( <sup>2</sup> )	( <sup>2</sup> )
April, 1931.....	<sup>1</sup> 228,000	25.6	<sup>1</sup> 123,000	13.8

<sup>1</sup> Assuming that the percentages of unemployment and part-time employment in the sample surveys are representative of the city.

<sup>2</sup> Not released.

"A comparison of the results of these two surveys and one census indicates that the number of wage earners totally unemployed in the last of April, 1931, was about the same as in December, 1930, and somewhat smaller than in January, 1931. Part-time employment would seem to have been reduced approximately 43 per cent or to slightly over one-half of what it amounted to in December, 1930. Full-time employment increased from 51.1 per cent in December, 1930, to 60.6 per cent in April, 1931.

"A considerable part of the improvement in the employment situation from midwinter to April can be attributed to the usual seasonal rise in employment. The degree of improvement does not appear to be large enough to warrant an assumption that the cyclical unemployment position has been greatly improved.

#### Method of Making the Survey

"APPROXIMATELY 8 per cent, or 37,635, of the families in Philadelphia were interviewed in taking this survey of unemployment. The families interviewed are scattered throughout the 10 school districts in Philadelphia. These families are located in 150 school blocks (a school block comprises several city blocks) which were selected so as to comprise a sample representative of the city geographically as well as economically and socially. The field work was done by attendance officers of the Bureau of Compulsory Education and by a selected group of unemployed. Second and third calls were made in an attempt to interview every family in the areas surveyed. There were a small number of families who were not available even though second and third calls were made in the evening.

"In order to establish the accuracy of the results, 5 per cent of all the families interviewed by each enumerator are being reinterviewed by other enumerators. The 5 per cent sample check on each enumerator was selected so as to represent both temporally and spatially all of the work done by an enumerator.

<sup>1</sup> For previous surveys and census of unemployment in Philadelphia, see Labor Review, Washington, 1930 (February, pp. 17-24, May, p. 31, July, pp. 35-37); 1931 (March, p. 54 and April, p. 40).

## Results of the Preliminary Hand Count, by Districts

"TABLE 2 shows the results of the preliminary hand count of the April, 1931, survey by school districts. It will be noted that the degree of unemployment and part-time employment varies greatly from district to district. The extent of unemployment ranges from 16.8 per cent of the wage earners in district 8 and 18.3 per cent in district 1 to 35.7 per cent in district 3 and 31.7 per cent in district 2. Part-time employment varies from 6.7 per cent in district 4 to 18.9 per cent in district 10."

TABLE 2.—SUMMARY TABLE OF PRELIMINARY RESULTS, BY SCHOOL DISTRICTS

District	Section of city	Number covered		Employed full time		Employed part time		Unemployed	
		Families	Wage earners	Number	Per cent	Number	Per cent	Number	Per cent
District 1	West	3,914	6,602	4,526	68.6	864	13.1	1,212	18.3
District 2	South	3,701	7,185	4,229	58.9	677	9.4	2,279	31.7
District 3	do	2,594	5,143	2,398	46.6	911	17.7	1,834	35.7
District 4	West	3,917	7,738	4,985	64.4	514	6.7	2,239	28.9
District 5	Central	5,010	9,587	5,707	59.5	1,307	13.6	2,573	26.9
District 6	do	2,700	5,508	2,906	52.8	1,000	18.1	1,602	29.1
District 7	Kensington	3,799	6,610	3,720	56.3	1,181	17.9	1,709	25.8
District 8	Northwest	4,751	7,884	5,784	73.4	774	9.8	1,329	16.8
District 9	North central	13,714	5,992	3,539	59.1	1,054	17.6	1,399	23.3
District 10	Northeast	3,535	6,035	3,610	59.8	1,140	18.9	1,285	21.3
Total		37,635	68,284	41,404	60.6	9,442	13.8	17,458	25.6

Table 3 presents a brief description of the economic, racial, and occupational characteristics of each school district.

TABLE 3.—SUMMARY DESCRIPTION OF EACH SCHOOL DISTRICT

District and section	Economic status	Racial characteristics	Occupations
District 1: (a) West	High	Native white	Clerical and trade.
(b) Southwest	Medium	Native and foreign white	Industrial.
District 2: South	Low to medium	Foreign born and colored	Do.
District 3: South	do	do	Do.
District 4: (a) Overbrook	High	Native white	Professional and executive.
(b) West	Low to medium	Mixed	Industrial and trade.
District 5: Central	Medium	Native and foreign white	Do.
District 6: Central	Low	Foreign born and colored	Industrial.
District 7: Kensington	Low to medium	Native white	Do.
District 8: (a) Germantown	High	do	Professional and executive.
(b) Manayunk	Low to medium	Foreign born	Industrial and trade.
District 9: (a) North central	Medium	Native white	Clerical and trade.
(b) Olney and Oak Lane	High	do	Professional and executive.
District 10: Northeast	Low to high	Mixed	Mixed.

In Table 4 the findings of six canvasses of unemployment in Philadelphia are given:

TABLE 4.—COMPARISON OF FOUR SURVEYS AND TWO CENSUSES OF UNEMPLOYMENT TAKEN IN PHILADELPHIA, APRIL, 1929, TO APRIL, 1931

Date	Agency	Per cent of total unemployment	Per cent of part-time employment
April, 1929	Industrial research department	10.4	-----
April, 1930	do.	15.0	5.2
April, 1930	United States census	9.5	-----
December, 1930	Metropolitan Life Insurance Co.	24.9	24.0
January, 1931	United States census	27.7	-----
April, 1931	Industrial research department	25.6	13.8

### Unemployment in Foreign Countries

THE following table gives detailed monthly statistics of unemployment in foreign countries, as shown in official reports, from January, 1930, to the latest available date:

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES<sup>1</sup>

Date (end of month)	Australia		Austria	Belgium				Canada	
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies				Trade-unionists unemployed	
	Number	Per cent		Wholly unemployed		Partially unemployed		Number	Per cent
				Number	Per cent	Number	Per cent		
1930									
January	(1)		273, 197	22, 542	3.5	25, 782	4.0	22, 795	10.8
February	(2)		284, 543	16, 085	2.6	31, 222	4.9	24, 175	11.5
March	63, 144	14.6	239, 094	14, 030	2.2	28, 469	4.5	22, 912	10.8
April	(2)		192, 477	13, 715	2.2	36, 605	5.8	18, 581	9.0
May	(2)		162, 678	12, 119	1.9	38, 761	6.1	20, 424	10.2
June	80, 595	18.5	150, 075	12, 226	1.9	41, 336	6.5	21, 380	10.6
July	(2)		153, 188	15, 302	2.4	48, 580	7.7	18, 473	9.2
August	(2)		156, 145	17, 747	2.8	51, 649	8.2	18, 232	9.3
September	90, 379	20.5	163, 894	23, 693	3.8	61, 623	9.9	19, 356	9.4
October	(2)		192, 778	27, 322	4.3	54, 804	8.5	22, 403	10.8
November	(2)		237, 745	38, 973	6.1	76, 043	12.0	28, 408	13.8
December	104, 951	23.4	294, 845	63, 585	9.3	117, 167	17.0	37, 339	17.0
1931									
January	(2)		331, 239	77, 181	11.1	112, 734	16.2	33, 664	16.0
February	(2)		334, 041	81, 750	11.7	121, 906	19.4	31, 617	15.6
March	115, 538	25.8	304, 084	81, 305	11.3	125, 972	17.7	32, 300	15.5
April	(2)		246, 845						
May			208, 852						

<sup>1</sup> Sources: League of Nations—Monthly Bulletin of Statistics; International Labor Office—International Labor Review; Canada—Labor Gazette; Great Britain—Ministry of Labor Gazette; Austria—Statistische Nachrichten; Australia—Quarterly Summary of Australian Statistics; Germany—Reichsarbeitsblatt, Reichs Arbeitsmarkt Anzeiger; Switzerland—Wirt. u. Social. Mitteilungen, La Vie Economique; Poland—Wiedomosci Statystyczne; Norway—Statistiske Meddelelser; Netherlands—Maandschrift; Sweden—Sociala Meddelanden; Denmark—Statistiske Efterretninger; Finland—Bank of Finland Monthly Bulletin; France—Bulletin du Marche du Travail; Hungary—Magyar Statisztikai Szemle; Belgium—Revue du Travail; New Zealand—Monthly Abstract of Statistics; U. S. Department of Commerce—Commerce Reports; and U. S. Consular Reports.

<sup>2</sup> Not reported.

<sup>3</sup> Computed in the Bureau of Labor Statistics from official report covering membership of unions reporting and per cent of unemployment.



## STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Czechoslovakia		Danzig (Free City of)	Denmark		Estonia	Finland	France	Germany
	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployment funds—unemployed		Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered
	Number	Per cent		Number	Per cent				
1930									
January	39,199	3.6	19,282	55,876	20.3	5,608	12,696	1,484	3,217,608
February	40,550	3.6	21,153	59,363	21.0	4,580	11,545	1,683	3,365,811
March	45,567	4.0	20,376	47,109	15.6	3,575	10,062	1,630	3,040,797
April	42,664	3.7	18,371	33,471	11.8	2,227	7,274	1,203	2,786,912
May	41,068	3.8	16,232	27,966	9.4	2,065	4,666	859	2,634,718
June	37,853	3.4	14,975	24,807	8.7	910	3,553	1,019	2,640,681
July	46,800	4.1	15,330	26,200	9.3	762	4,026	856	2,765,258
August	52,694	4.7	15,687	26,232	9.0	1,039	5,288	964	2,883,000
September	57,542	5.3	16,073	27,700	9.0	1,414	7,157	988	3,004,000
October	61,213	5.5	17,307	32,880	11.4	3,282	10,279	1,663	3,252,000
November	65,904	5.9	20,272	44,200	15.3	5,675	10,740	4,893	3,683,000
December	93,476	8.3	24,429	71,100	24.6	6,163	9,336	11,952	4,384,000
1931									
January	104,580	9.5	27,081	70,961	24.4	5,364	11,706	28,536	4,887,000
February	117,450	10.0	28,192	73,427	25.6	4,070	11,557	40,766	4,972,000
March	119,350	10.9	27,070	67,725	23.6	3,729	11,491	50,815	4,756,000
April	107,238	8.9	24,186	45,698	15.9	2,424	11,584	49,958	4,358,000
May			20,686	37,856	13.1			41,339	4,053,000

Date (end of month)	Germany					Great Britain and Northern Ireland			
	Trade-unionists					Compulsory insurance			
	Wholly unemployed		Partially unemployed		Number unemployed in receipt of benefit	Wholly unemployed		Temporary stoppages	
	Number	Per cent	Number	Per cent		Number	Per cent	Number	Per cent
1930									
January	1,004,787	22.0	501,950	11.0	2,482,648	1,183,974	9.8	336,474	2.8
February	1,076,441	23.5	593,380	13.0	2,655,723	1,211,262	10.0	371,840	3.1
March	995,972	21.7	576,153	12.6	2,347,102	1,284,231	10.6	409,785	3.4
April	926,831	20.3	553,098	12.1	2,081,068	1,309,014	10.8	451,506	3.8
May	895,542	19.5	552,318	12.0	1,889,240	1,339,595	11.1	516,303	4.2
June	896,465	19.6	578,116	12.6	1,834,662	1,341,818	11.1	569,931	4.7
July	930,777	20.5	631,903	13.9	1,900,961	1,405,981	11.6	664,107	5.5
August	984,384	21.7	670,466	14.8	1,947,811	1,500,990	12.4	618,658	5.1
September	1,011,820	22.5	677,627	15.1	1,965,348	1,579,708	13.1	608,692	5.0
October	1,061,570	23.6	693,379	15.4	2,071,730	1,725,731	13.9	593,223	4.8
November	1,167,930	26.0	721,658	16.1	2,353,980	1,836,280	14.8	532,518	4.3
December	(2)	31.7	(2)	16.9	2,822,598	1,853,575	14.9	646,205	5.3
1931									
January	(2)	34.2	(2)	19.2	3,364,770	2,044,209	16.5	618,633	5.0
February	(2)	34.5	(2)	19.5	3,496,979	2,073,578	16.7	623,844	5.0
March		33.6		18.9	3,240,523	2,052,826	16.5	612,821	5.0
April	(2)	31.8	(2)	18.1	2,790,112	2,027,896	16.3	564,884	4.6
May					2,507,732				

<sup>2</sup> Not reported.

## STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Great Britain	Hungary			Irish Free State		Italy		Latvia
	Number of persons registered with employment exchanges	Trade-unionists unemployed			Compulsory insurance—unemployed		Number of unemployed registered		Number unemployed remaining on live register
		Christian (Budapest)	Social-Democratic		Number	Per cent	Wholly unemployed	Partially unemployed	
			Number	Per cent					
1930									
January	1,491,519	1,161	21,533	14.5	31,592	11.1	466,231	23,185	9,263
February	1,539,265	1,120	21,309	14.8	(2)		456,628	26,674	8,825
March	1,677,473	983	21,016	14.6	(2)		385,432	28,026	6,494
April	1,698,386	906	20,139	13.7	26,027	9.2	372,236	24,305	3,683
May	1,770,051	875	19,875	13.6	(2)		367,183	22,825	1,421
June	1,890,575	829	18,960	13.0	(2)		322,291	21,887	779
July	2,011,467	920	19,081	13.2	23,393	8.2	342,061	24,209	607
August	2,039,702	847	21,013	14.5	(2)		375,548	24,056	573
September	2,114,955	874	22,252	16.0	(2)		394,630	22,734	1,470
October	2,200,413	999	22,914	16.7	20,775	(2)	446,496	19,081	6,058
November	2,274,338	975	23,333	17.0	22,900	(2)	534,356	22,125	8,608
December	2,392,738	935	24,648	17.9	25,622	(2)	642,169	21,788	10,022
1931									
January	2,613,749	953	26,191	19.1	26,167	(2)	722,612	27,924	9,207
February	2,627,559	965	27,089	19.8	28,681	(2)	765,325	27,110	8,302
March	2,581,030	996	27,092	(2)	25,413	(2)	707,486	27,545	8,450
April	2,531,674	1,042	27,129		23,970	(2)	670,353	28,780	6,390

Date (end of month)	Netherlands		New Zealand		Norway			Poland
	Unemployment insurance societies—unemployed		Trade-unionists unemployed		Trade-unionists (10 unions) unemployed		Number unemployed remaining on live register	Number unemployed registered with employment offices
	Number	Per cent	Number	Per cent	Number	Per cent		
1930								
January	56,535	13.9	(2)		7,786	19.0	22,549	241,974
February	50,957	12.5	4,348	8.5	7,851	18.9	22,974	274,708
March	34,996	8.6	(2)		7,503	17.8	22,533	289,469
April	28,421	6.9	(2)		6,701	15.8	19,829	271,225
May	26,211	6.3	5,884	10.9	5,239	12.2	16,376	224,914
June	23,678	5.5	(2)		4,700	10.8	13,939	204,982
July	29,075	6.7	(2)		4,723	10.8	11,997	193,687
August	32,755	7.6	7,197	13.5	5,897	13.4	12,923	173,627
September	35,532	8.2	(2)		7,010	15.7	17,053	170,467
October	41,088	9.6	(2)		8,031	18.0	20,363	165,154
November	46,807	11.8	8,119	15.5	9,396	21.4	24,544	209,912
December	72,191	16.5	(2)		11,265	25.5	27,157	299,797
1931								
January	103,728	23.4	(2)		(2)		28,596	340,718
February	99,753	22.2	(2)		(2)		29,107	358,925
March	80,525	17.7	429,941		(2)		29,095	372,536
April	62,573	13.6	(2)		(2)		28,477	375,317
May							25,206	

<sup>2</sup> Not reported.<sup>4</sup> New series of statistics showing unemployed registered by the employment exchanges. Not only workers who are wholly unemployed are included but also those who are intermittently employed.

## STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Poland				Rumania	Saar Ter-ritory	Sweden	
	Industrial workers				Number unem-ployed remaining on live register	Number unem-ployed registered	Trade-unionists unemployed	
	Extractive and manufacturing industries—wholly unem-ployed		Manufacturing industries—par-tially unem-ployed					
	Number	Per cent	Number	Per cent				
1930								
January	219,333	24.3	108,812	24.8	12,622	11,307	45,636	14.2
February	251,627	27.5	120,058	28.4	15,588	11,949	45,460	13.2
March	265,135	28.7	120,844	28.9	13,045	8,882	42,278	12.5
April	246,670	27.0	113,594	26.9	13,412	7,522	38,347	11.1
May	201,116	23.0	104,469	24.2	25,096	7,362	28,112	8.3
June	182,600	21.6	94,375	22.2	22,960	6,330	28,956	8.1
July	170,665	20.5	70,597	17.0	23,236	7,095	27,170	7.8
August	150,650	18.3	74,289	17.1	24,209	7,099	28,539	8.1
September	146,642	17.8	74,285	16.5	39,110	7,527	34,963	9.8
October	141,422	17.5	91,854	14.8	36,147	9,013	43,927	12.2
November	( <sup>2</sup> )		106,835	23.6	42,689	12,110	57,070	15.3
December	( <sup>2</sup> )		95,637	23.1	36,212	15,245	86,042	22.9
1931								
January	( <sup>2</sup> )		82,717	23.8	38,804	18,921	69,437	19.8
February			92,838	27.1	43,270	20,139	66,923	18.4
March					( <sup>2</sup> )	18,292	72,944	19.3
April						18,102		

Date (end of month)	Switzerland				Yugo- slavia
	Unemployment funds				
	Wholly unem- ployed		Partially unem- ployed		Number of unem- ployed registered
	Number	Per cent	Number	Per cent	
1930					
January .....	10,523	4.4	10,710	4.4	8,508
February .....	9,971	4.1	11,445	4.7	9,437
March .....	7,882	2.6	12,642	4.2	9,739
April .....	5,203	2.1	12,755	5.3	12,052
May .....	5,356	2.2	13,129	5.4	8,704
June .....	5,368	1.7	17,688	5.7	6,991
July .....	4,751	1.9	15,112	6.2	7,236
August .....	5,703	2.3	19,441	7.9	6,111
September .....	7,792	2.5	26,111	8.3	5,973
October .....	7,399	3.0	23,309	9.4	6,609
November .....	11,666	4.7	25,793	10.5	7,219
December .....	21,400	6.6	33,483	10.4	9,989
1931					
January .....	20,551	8.3	30,977	12.5	11,903
February .....	20,081	7.9	30,879	12.2	14,424
March .....	18,991	5.4	41,880	12.4	12,029
April .....	10,389	4.0	27,726	10.6	11,391

<sup>2</sup> Not reported.

## Employment in Japan, End of 1930

THE number of workers in Japan at the close of 1930, classified by sex and employment, is shown in the following table, based on a report recently published by the Japanese Bureau of Social Affairs:<sup>1</sup>

<sup>1</sup> International Labor Office. Industrial and Labor Information, Geneva, May 25, 1931, pp. 286, 287.



## EMPLOYMENT STATISTICS FOR JAPAN, END OF 1930

Class of employment	Number of workers		
	Male	Female	Total
Factory:			
State.....	108,044	26,986	135,030
Municipal.....	10,098	1,744	11,842
Private.....	976,245	952,888	1,929,133
Total.....	1,094,387	981,618	2,076,005
Mining.....	191,539	34,323	225,862
Transportation and communication.....	462,640	44,056	506,696
Casual and other.....	1,469,464	434,975	1,904,439
Grand total.....	3,218,030	1,494,972	4,713,002

The total number of workers—4,713,002—given in the above tabulation is 160,079 less than the number employed at the same period in the preceding year. The decreases for other classes of workers at the close of 1930 as compared with 1929 are: Workers in factories, 126,000; workers in mines, approximately 52,000; and casual and other workers, about 7,000. There was, however, an increase of about 25,000 workers in transportation and communication.

The shrinkage in the number of workers in factories and mines is reported to be due to discharges "on account of curtailment of production, cessation of operations, closure of factories, etc., owing to the severe depression which started in 1929 and still continues."

## INSURANCE AND BENEFIT PLANS

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### Unemployment Benefit Plan of Canadian Kodak Co.

**A**CCORDING to Industrial Canada, issue of June, 1931, published by the Canadian Manufacturers' Association, an unemployment benefit plan has recently been adopted by the Canadian Kodak Co. (Ltd.). The plan provides that the company will start at once to accumulate the necessary reserves with a view to being in a position to pay benefits in 1933.

The company has, in the past, put into effect various stabilization measures which have to a large extent taken care of ordinary periodic unemployment. During the present depression, in addition to the usual stabilization methods, the company has carried out as much repair and maintenance work as possible to keep the force-employed and has engaged in building operations. When it became necessary, however, on account of the depression to reduce output, working hours were reduced in order to spread the work as far as possible among the entire force, but some lay-offs were necessary.

The company believes that some plan of building up reserves to take care of future unemployment is needed to supplement the other methods of stabilizing employment, but is strongly in favor of such measures being carried out voluntarily and independently by the separate industries, and not by compulsion or governmental insurance.

The unemployment benefit plan provides for the creation of a reserve fund through an annual appropriation by the company. The company will bear the entire costs of the plan except during a prolonged period of unemployment, when an emergency may be declared and the fund will be supplemented by contributions of 1 per cent of earnings from all employees not receiving benefits and including all officials. The plan, which will become effective for the payment of benefits January 1, 1933, will be administered by a committee appointed by the management. Benefits will be payable after two continuous weeks of unemployment and will amount to 60 per cent of the average weekly earnings with a maximum of \$18 per week. The maximum number of weekly benefits during any 12 consecutive months will range from 6 weeks for 1 to 1½ years' service with the company to 13 weeks for 5 years' service and over. Employees securing temporary work outside will be eligible for benefits equal to the difference between the earnings on the temporary work and the normal weekly earnings prior to unemployment. Employees laid off for lack of work will be required to report to the company at specified periods and to state what efforts have been made to secure other employment.

### Present Status of Industrial Mutual Benefit Associations

THE effect of the development of the newer agencies of relief for employees, such as workmen's compensation and group insurance, upon the activities of industrial mutual benefit associations formed the subject of a recent study by the National Industrial Conference Board.<sup>1</sup>

In spite of the fact that these newer forms of insurance against the contingencies of accident, sickness, and death have had such a decided growth in recent years, the study showed that they have exerted only a slight effect upon the activities of the benefit associations. The investigation covered 398 companies with active associations, 388 of which furnished total employment and association membership data. These companies employed approximately 1,119,000 workers, of whom 824,940, or about 74 per cent, were members of the mutual benefit associations. As many of the associations covered in the present study were included in an earlier one, it was possible to compare present tendencies with conditions in 1922 when the former study was made.

The mutual benefit association is designed to provide the greatest possible protection for its members in case of sickness or accident at the lowest possible cost, and to accomplish this purpose it is necessary that a large proportion of the employees should be members. There is always the danger that the older workers and those most susceptible to illness will form too large a proportion of the membership, with the result that premiums or dues will be disproportionately high. To obviate this risk and also to insure the protection of all the employees, some companies require membership in the association as a condition of employment. During the past eight years there has been evident somewhat of a trend toward compulsory membership, although the majority of the benefit associations still do not require it. Another method of reducing costs is the exclusion from membership of workers who are most liable to disability. This is done through fixing an age limit for new members, by means of physical examinations, and in some cases by the exclusion of certain classes of employees who ordinarily have a higher rate of absence due to sickness. If no physical examination is required, the new employee usually must sign a statement that he is in good health. The practically universal provision that members lose their membership in the association when they cease to be employed by the company arises from the difficulty of supervising such members, the increased chances of malingering, and the fact that usually only former employees who are subject to disability will retain their membership.

It has appeared probable, with the rapid development of group insurance, that the mutual benefit association would be forced to surrender its place to the commercial insurance company, but from the study it does not seem that this has occurred. The insurance companies have made considerable progress in the field of industrial life insurance, but benefit associations continue to carry the sickness and accident risks and even where insurance companies have entered this field the benefits provided by them supplement rather than take the place of those provided by the association. Nothing in the

<sup>1</sup> National Industrial Conference Board (Inc.). The present status of mutual benefit associations, New York, 1931.



information secured in connection with the study indicates, the report states, that mutual benefit associations are losing the important place they have held for years in the industrial relations program, and the fact that they have held their own "through a period that has witnessed the rise and fall of a variety of industrial relations theories and projects bears witness to their success in filling a recognized need."

In response to altered economic conditions there has been a general tendency to increase benefits in those associations providing fixed benefits, while a method of adjusting the benefits in a measure to individual needs is found in the graduated scale based on the normal wages or earnings.

A trend toward the contraction rather than the expansion of the activities of benefit associations is shown, so that instead of taking a part in the control or direction of other industrial relations activities it is more and more becoming the practice for the associations to confine their activities to the provision of insurance against disability. The associations are also shown by the study to be giving increasing consideration to the actuarial aspects of their plans, with the result that the finances of the associations show increasing soundness.

The maintenance of a mutual benefit association is of advantage to both the employer and the employees—to the employee through the furnishing of direct financial assistance when it is most needed, and to the employer through the more efficient plant operation resulting from reduction of absences from work and relief from appeals for assistance for disabled employees. In addition the better morale arising from the mutuality of the enterprise has the effect of stimulating the feeling of plant unity and cooperation.

# INDUSTRIAL AND LABOR CONDITIONS

## Restriction of Output by Unorganized Workers

**M**UCH has been said and written about trade-union restrictions on output, but the possibility that unorganized workers might deliberately arrange to keep their production down to what they consider a safe figure seems to have been largely ignored. A study of the subject has recently appeared, under the title "Restriction of Output among Unorganized Workers," giving the results of a personal investigation made by Stanley B. Mathewson, executive director of the Springfield, Ohio, Chamber of Commerce. On the general principle that the only way to learn the true situation was to mingle with the workers as one of themselves, Mr. Mathewson secured employment in shops and factories and made a study of what was actually happening there.

The material on which this study is based was obtained from first-hand observations and from interviews with approximately 350 workers and 65 executives. Two hundred and twenty-three instances in which restriction was evident were recorded in detail. They ranged over 105 establishments, in 47 localities, representing 25 classified industries and 14 miscellaneous ones.

While making his observations, the author worked as a laborer, machine operator, bench assembler, conveyor assembler, and skilled mechanic; and he lived with working people in their home environment. He worked at various times on day, afternoon, and midnight shifts. He held 11 different jobs in two industrial centers. Records of this part of the investigation were first made in the form of personal letters to an associate. These letters detailed full experiences of each working day while they were still fresh, related conversations, and told of contacts which took place outside of working hours. A group of six workers who cooperated in the study made a series of similar special reports in the form of personal letters from other industrial centers.

Upon the basis of the facts thus collected, the present volume has been prepared, consisting of two parts. The first part assembles instances of restriction grouped according to the cause assigned by the workers for their action, and the second, containing explanations of restrictions and comments on the practice, includes the opinions of managers, of an economist, and of the investigator. This section contains chapters by William M. Leiserson, professor of economics at Antioch College, by the president of the Dennison Manufacturing Co., and by the president of Antioch College.

### Warning as to Limitations of Study

**W**HILE the investigation showed frequent instances of restricted output, Mr. Mathewson emphasizes the fact that no attempt was made to discover how generally restriction is practiced, and that its existence in some cases is entirely compatible with much cheerful overwork in others.

Every executive has known workers who voluntarily put in long hours of unpaid overtime. Frequently, factory employees on piecework or bonus also labor

excessively either to increase their earnings or to meet a factory emergency. Furthermore, linemen, repairmen, and others often perform heroic tasks to restore public service. A complete understanding of workers' attitudes should include this other side of the picture, with full recognition of the fact that the efforts of wage earners may fluctuate above as well as below the level of a full day's work. However, in this investigation it was impossible to gather material for a complete picture. The investigator limited his study and his report to restriction of output. \* \* \*

This report is not intended to give the impression that all workers restrict output. Since the investigator and the group working with him were concentrating on the problem, they found a good many instances—people usually find what they seek. They realize, of course, that restriction is not universal. On the other hand, the investigation leads them to believe that it is prevalent enough to constitute a major problem in American industry.

### Kinds and Causes of Restriction on Output

To a large extent the first part of the volume is a case record, giving specific instances of restriction which the author or his fellow workers found in practice. (Simple neglect of duties or a mere disinclination to effort, it is explained, were not included; only cases were considered in which an intent to restrict was clearly evident.) The restrictions might be brought about by the pressure of opinion in the working group, or might be in compliance with the strong hints or direct orders of the "boss," whether straw foreman, foreman or, in some cases, even superintendent. The methods were various in the extreme, ranging from a careful slowing down of effort to planned waste of time by inefficient methods of getting or removing work, dawdling over the job, meticulous elaboration of work, interfering with the smooth working of a machine, or even, in extreme cases, going over and over the same piece of work, so as not to turn in too large an amount of finished product.

The cause is apt to be complex, two or more reasons usually operating in a given case. The most fundamental of these seems to be a profound belief that whether time rates or piece rates prevail increased effort will not bring a corresponding increase in returns and may simply result in increased demands, with, in the case of piece rates, a cut in the rates. Closely connected with this is the belief that the increased demands may easily become too great for the slower or less effective workers, who may lose their jobs because they can not keep up with the new pace, so that as a matter of group solidarity the faster worker holds himself back. A second powerful cause is the employee's fear of working himself out of a job, or, in the case of a foreman, the desire to hold his group together and prevent a threatened lay-off. Personal grievances against the management constitute a third cause, but this operates usually only in individual cases, not in the group as a whole. Numerous instances of restriction are given and in some cases are accompanied with the worker's statement of the circumstances which convinced him that it was not wise to put forth his best efforts.

### Restriction Under Time Rates

It is generally understood that time rates do not offer any special inducement for large output, but on the face of it there seems no special reason why they should lead to restriction. In themselves they do not, but the employer's attitude may produce that result.



Just how wage earners come to believe that increased output under a system of time wages will go unrewarded can best be told in the words of working people themselves. Said a man whose occupation was inspecting roller bearings:

"Recently there has been a big rush and production has been pushed to the limit. They (the management) asked for more production and more production. They would come around and ask for a hundred more a day, and every time I met the new demand they would ask for more. I began to wonder where this would stop and an old hand finally informed me that it wouldn't. They always ask for more, no matter what they are getting. Another thing I discovered was that if I did get my production up to a certain point and then dropped below for any length of time, they would ask me to keep up to the highest point all the time. There were several old-timers who were getting away with less than I did, just because they had never done more."

And a girl who was experienced in a wide range of employment explained: "I have learned through sad experience that the more your superiors find they can get out of you the more they come to expect. The only way to protect yourself is never to work at any thing like full capacity. I know that most restriction is due to the worker's desire to save and protect herself and not to any other motive."

### Restrictions Under Piece Rates

RIGHTLY or wrongly, the workers are thoroughly convinced that under a piece-rate system output beyond a certain point will mean a cut in the rate. Different firms, they believe, have different but well-defined ideas as to what constitutes a proper day's earnings and will not permit materially larger earnings. Therefore when a worker enters a new establishment, he considers it wise to find out what the standard is and to keep within it; should he neglect to do so, the other workers may call the matter to his attention.

Most of the work in one of the largest tire-building plants in the country is on a piece-rate basis. In one department the pieceworkers pushed their earnings up to \$12 a day. Said an employee in this department: "The rate was immediately cut. Now we know that the maximum paid for this work is \$7 a day. It would be possible for us to do much more but we are careful not to." In another department the older men have learned from experience and the new workers from the older men, that the highest wage the company will pay for their particular work is \$9 a day. The rate is 10 cents for each piece. "When we have built our 90 pieces, we literally quit. Every new man coming in is warned not to produce more."

Sometimes the results of this belief are curious. Instances were found of workers who had discovered new and better ways of doing a job, but who carefully hid these methods from those in charge of the work. They used them for their own benefit to get through their set task more quickly or easily, and concealed this result by unnecessary delays, believing that if the employer knew of the better method there would be an immediate cut in rates. Sometimes a worker or a group of workers would produce more than enough to earn the day's rate, and conceal the surplus so that they might fall back on it if some accident to the machines, poor material, or some other cause beyond their control, slowed production so that they would not make a full day's wage. This was called making a "bank," and seemed to be a fairly common practice, but it had its dangers. A man detected in holding back finished work was apt to be discharged. Sometimes, with surplus work on hand, a mistake might be made in the amount turned in, with disconcerting results for the workers:

A gang of workers in a machine manufacturing plant got into trouble by failing to stay within the safety zone or limit. The custom in this department was to keep the inspector informed just what to report, as completed, and to hold the excess back. One day the workers made an error in their figures.

The inspector declared: "I let what they told me go through. It was about 5 per cent more than they should have figured and the time-study man came right in and cut hell out of their rates."

In spite of this, the practice of holding out work continued in this plant for a number of years, according to the director of a service department.

Since a piece rate is often set on the basis of a time study of a given operation, the workers have developed a number of protective devices for slowing down while the study is being made, in order that the rate set may not be lower than they consider just. When a time study is to be made, the knowledge seems to spread rapidly through an establishment, and the author gives several instances of the ways in which workers hold down output during the period when a test is either being made, or impending, so as to discourage any lowering of the rate.

The fear of being laid off, as a cause for restricting output, was found to be especially potent in the building and construction industries, where workers are engaged for a particular piece of work and know that as soon as that is finished they will be adrift again. "Desperation is the only word to describe the sentiment and the work methods of many construction employees when the job is nearing completion." It appears more or less strongly in all seasonal industries; the workers know they can not prevent the end of the season, but they try to put off the evil day by stringing out their work in every possible manner.

#### Opinions and Explanations of Managers

INTERVIEWS were held with some 65 executives, employing over half a million workers, in order to discuss with them cases of restriction in their own as well as in other organizations. The author divides these executives into three groups. The first, comprising about 20 per cent of the total, thought restriction was either no problem at all, or a minor, negligible one. The second, amounting to about 65 per cent, stated that restriction had formerly been practiced in their establishments but, owing to certain changes, had been reduced to a minimum or completely eliminated, while the third group admitted or suspected its existence at times, and attached varying degrees of importance to it. The first group generally based their belief on the character of their employees, or on their familiarity with the work, which would enable them to detect any slacking, or on some similar condition. The second group believed they had stopped restriction by some change of methods, and on inquiry it was found that this change usually consisted in the installation of some new system of wage payment—most frequently, the group-bonus plan.

This plan has spread rapidly of late, and it is interesting to know that all the executives interviewed who use this scheme believe it has eliminated restriction, or has made such as still exists virtually innocuous. This is surprising, for much of the case material presented in Part I was collected from plants of these same executives.

The executives who were convinced that such methods of wage payment had eliminated restriction stated also that it was not the practice in their plants to cut rates. Investigation among their workers convinced Mr. Mathewson that the latter believed exactly

the contrary in regard to both points. On the whole, he felt that the testimony of these executives was not well founded.

The belief held by executives, namely, that various incentive-wage-payment plans tend to lessen restriction was one of the most puzzling things in the whole investigation. Perhaps, however, many of the managers ignore restriction for a reason similar to that given by a vice president and general manager of the largest plant of its kind in the world. He stated that in his own case his lack of knowledge of any restriction in his organization was not the result of any investigation of facts or of how any one system of wage payment affected regulation, but of his isolation from the workers.

In some cases, however, executives admitted and justified the practice of cutting rates so as to keep earnings down.

In attempting to find out why the practice of rate cutting is so common in industry, an experienced executive was asked what objection there would be to drill-press operators, for example, earning all they could on certain jobs.

He said, "That would never do. If drill-press operators could double their earnings on piece rates, for instance, this would cause them to earn as much as toolmakers. Operating a drill press can ordinarily be learned in a short time, while it takes toolmakers years to learn their trades. The immediate effect of permitting the less skilled workers to earn as much as the toolmakers would be to take away the financial incentive for workers to learn skilled trades."

In the third group of executives, two rather unusual attitudes were found. One manufacturer never laid off workers when work became slack, but knew that in spite of this, restriction prevailed when work grew scarce. This he considered natural, and pointed out that the whole office shared in the practice.

As he put it, "I let up on the superintendent, he lets up on the foremen, and the foremen let up on the men. Everybody looks the other way when there are few orders on hand."

This executive attributed such restriction to the fact that he and his associates had a human interest in the workers and their families, and that the higher unit cost in slack times was a legitimate price to pay for fluctuations in their business. Although he did not so name it, the practice he described seems to be an informal type of unemployment insurance.

The other unusual attitude was that of an executive who admitted that restriction prevailed, but considered it of no importance. He thus summarized his view:

"Well, what about restriction—if the men get out the prescribed production schedules? If a concern plans to get out 25,000 units a month, purchases material for that number and the schedule is met, the men couldn't produce any more if they wanted to. They wouldn't have any material to work on."

### The Investigator's Inferences

As a result of the study the investigator was convinced that restriction is a widespread institution, deeply entrenched in the habits of American workers, that scientific management has failed to develop between employer and employee a spirit of confidence leading to willing cooperation, that underwork and restriction are greater problems than overspeeding and overwork, that managers have been so content with the over-all results of man-hour output that only superficial attention has been given to the workers' contribution or lack of contribution to the increased yield, and that the practices of most manufacturing managements have not as yet brought the worker to feel that he can freely give his best efforts without incurring penalties rather than rewards.



Our experiences emphasize the absence of confidence between parties to the labor contract. We saw men hiding finished product under their workbenches, afraid to turn it in; foremen working at cross purposes with time-study men and showing workers how to make time studies inaccurate; workmen killing time by the hour because the day's "limit" had been reached; men afraid to let the management learn of improved methods which they had discovered for themselves; older workers teaching youngsters to keep secret from the management the amount they could comfortably produce in a day; management trying first one "wage incentive" plan, then another, in an effort to induce men to do what we believe they really wanted to do in the first place. This entire investigation indicated that most working people hate the whole messy business of restriction and especially the complicated system of cunning devices they employ to cover it up.

The report brings no direct answer to the question: "What is to be done about it?" but suggests that the present situation between employer and employee resembles that which existed between seller and buyer when the maxim "caveat emptor" prevailed, and buying was accomplished by a process of haggling in which each party tried to get the better of the other. A different method has been found far more satisfactory in salesmanship; might it apply equally well to the wage relation?

When progressive merchants first took up such "crazy" ideas as one price, and "the customer is always right," it is safe to say that that generation of customers was no more right in individual ways than the worker is now right in his. The customer came to be right because the merchant lived up to his part of the new policy. May not the wage worker come to be right, also, when the employer goes as far on his side as the one-price merchant went to establish a new relationship with his customers? The merchant quickly found the new order to be "good business," and the experiences of those manufacturers who have sincerely tried to apply this idea in their labor relations forecast the same probable results in this field. Industrial good will may be won by employers who sell jobs to workers when they adopt the policies that have won good will for up-to-date merchants in selling goods to customers.

A minor suggestion relates to the method of setting standards of output. It might be possible that the observation and timing should be separated from the actual productive processes until they have been analyzed and tested under laboratory conditions with the cooperation of the workers.

Would not this enable managers to contract with production workers for a known standard of output at a predetermined price? Would it not go a great way toward convincing them that, like chemical analyses, the standards have been set only after carefully controlled experimentation, and that the workers could thereafter put forth every effort without fear of penalty?

### Economics of Restriction of Output

REVIEWING the data assembled, Professor Leiserson points out that the immediate stimuli to restricted output are of three general kinds:

1. Rate cuts, retiming of jobs and "wage-incentive" plans which require the worker to deliver additional work at lower rates of pay.
2. Lay-offs, part-time work, and protracted periods of unemployment which show that the market can not absorb all the labor the wage earners can give.
3. Unintelligent management that depends for results either upon driving, economic power and other dictatorial methods, or upon appeals to the business interests of the employees without understanding that these are not necessarily promoted by turning out more work at lower rates of pay.

Are the employees wholly wrong, he asks, in responding as they do to these stimuli? Is not restriction of output on their part the normal result of the scheme of things which fixes the price of labor in accordance with its relative scarcity? Perhaps, he suggests, to urge workers to turn out unlimited production is to expect them to disregard the profitability of their efforts.

Investors might as well be asked to furnish capital to industries regardless of the return, and manufacturers to keep their plants working full time regardless of the capacity of their markets to absorb the products at profitable prices.

The argument against limitation of labor output, he points out, is, basically, that restricted output increases the labor cost of commodities, and therefore the price to the consumer, that this reduces the amount of consumer goods a community can enjoy, and is in itself an ill. "Potentially at least, increased production means lower prices and a larger measure of well-being for the nation as a whole." This view, however, he holds, loses sight of the fact that the producer, as well as the consumer, is a part of the community and has interests which must be protected if the community as a whole is to flourish.

It has become increasingly evident, as in the plight of the farmers since the war, that when producers suffer from excessive production and low prices, the nation as a whole suffers; and public opinion as well as the law gradually developed a more sympathetic attitude toward collective action of producers to adjust production to market demands. \* \* \*

In law and theory, as well as in fact, it has become plain that the interests of producers as well as of consumers, of sellers as well as of buyers, need to be conserved. If this end is to be accomplished, neither unlimited production resulting in unduly low prices nor combinations to raise prices unduly can be permitted. A moderate policy of limitation of output is to be followed, which avoids both excessively high and excessively low production, in order that prices fair to all may be maintained and violent fluctuations avoided.

This principle of moderate regulation, Mr. Leiserson points out, is generally admitted as desirable in industry. In proof of this he quotes from advice and warnings issued to their members by producers' and trade associations of various kinds, and from the "reiterated advice of the United States Department of Agriculture to farmers to reduce their acreage and crops." It can not be questioned, he thinks, that the advice holds equally good in regard to the output of labor; the unfortunate feature of the situation is, that since the principle in its application to labor is not generally conceded, the restrictions are apt to be applied more or less secretly and unintelligently.

If, however, restricted production to control and stabilize income is as necessary for labor as it is for business, does not an intelligent handling of labor restriction require a similar frank recognition of the need and a frank declaration of policy and methods open to public scrutiny and criticism?

Such an attitude would call for the setting of reasonable standards of production by open conference between workers and employers in which the interests of both, and of the public, would be given fair consideration. "Give and take is needed, and open criticism and defense and subjection to public opinion and control in the interest of the community."

## What Employers Can Do About It

MR. DENNISON, himself the head of a well-known manufacturing company, also feels that the worker who practices restriction of output has abundant company in that line of action.

If workers restrict output for fear of a drop in price, worldly wise managers limit production under similar circumstances. The merchant properly "holds out" on his normal activity of buying when he fears a fall in price, as the bench worker holds out on his. They can find highly conservative sanctions under classical economics.

Nevertheless, he considers the situation serious, not so much because of the actual limitation of output, although circumstances may easily arise in which that will be of grave importance, as because of the indirect effects. It indicates an utter lack of the confidence and cooperation between employer and employee which is needed to make industry what it should be. The practice usually involves cunning and indirection, and produces a position in which the able and rapid worker must either disregard the interests of his less effective fellows, or else suffer a constant frustration of his own decent tendency to do a reasonable amount of worthwhile work. How can employers improve matters?

First, we can set to work to clear away the undergrowth of secondary causes, most of which are worth clearing out on their own account. Grouches and grievances can be reduced by a variety of methods known and already tested by personnel management experience. Stabilization of employment can be taken up as a specific and worthwhile problem, undertaking to reduce the amount of fluctuation in overtime and undertime, and in hiring on and laying off. Suggestions for improved methods can be invited and adequately rewarded. Job retiming can be promptly instituted where rates seem low. Efforts to develop new methods need not be devoted exclusively or too eagerly to high-rate jobs; certainly steps toward rate reduction should be very cautiously taken where only one or a few workers in a group have earned high premiums. The long-continued hidden losses which follow a cut in rates can be weighed against the gains to be expected from the cut, and even against the assumed losses of morale arising where the unskilled man earns more than the skilled. It can be recognized that the most earnest verbal guaranty against cutting loses all effect as soon as a single case can be interpreted as a breach.

But it is even more important, he thinks, to close up the gap between the foreman and the standard setters. The foreman must be carefully chosen and trained to understand the purpose underlying the job analyses and the establishment of performance standards; he is essential to their successful carrying out, and his part must be recognized and developed. The right selection of the members of the time-study department is equally important, and selling the idea of the value and real meaning of this department to the workers is essential. As to the universal value of piece rates, bonus payments, and wage incentives of various kinds, Mr. Dennison has some doubts. Tasks and workers differ widely, and the rates which fit one situation well may not answer for another. If incentive rates are used, it should be under careful control.

Clearly enough, if rates are to be set, their basic excuse must be that they call forth from each individual his own particular maximum, and that this maximum varies as among different individuals. To set a rate and then to set at work a train of influences which leads almost every man to produce the same output is to develop a conflict which will some day be serious. We must do one thing or the other; we can't have our cake and eat it. After we set incentive rates we must keep free our minds and our subconsciousness from any figure like 150, or 192, or any



other at which we begin to believe "something must be wrong with the rate." The penalties of free running may be great, but the penalties of rate limitation are surely greater.

### Regulation Versus Restriction

SUMMING up the results of the study, President Morgan calls attention to the fact that regulation of output is recognized as necessary to organized society. "The Interstate Commerce Commission refuses permission to build a new railroad where there are already enough. The steel industry does not produce steel rails when there is no demand." Regulated output is needed for labor in order that it may have security of employment, with a minimum of lay-offs or reductions of incomes, but this regulation should be secured by intelligent cooperation between management and labor. The lack of this cooperation is responsible for many of the undesirable features of restriction, and gives an opportunity for the operation of socially undesirable motives.

He stresses, however, the fact that the efforts of management to prevent restriction have not been sufficiently constructive. It is natural for every normal person to wish to have—and to know that he has—work of significance and value, and this is too often denied him by the conditions of modern industry.

Every sane worker demands that his labor shall have significance. Let a man see important work growing under his hand, let him feel that his own part is necessary and important, and you have a strong hold upon his loyalty and interest. Subdivide his work so that the thrill of accomplishment is denied, hide the ends to be achieved so that he can not see that his work plays a necessary part in the whole, deny him the dramatic and emotional climaxes which every man craves, and limitation of production becomes a natural expression of the sound instinct to eliminate useless effort. \* \* \* Capable and responsible workmen like to feel that they are players in the game, not merely pawns.

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### Growth of Strip Coal Mining and Its Effect on Labor

THE growth of strip mining in the bituminous coal industry is discussed and attention called to the chief factors that have contributed to this growth, in a paper recently published by the United States Bureau of Mines.<sup>1</sup> The total production of bituminous coal from strip mines was 19,788,577 short tons in 1928, or 17 times the tonnage (1,280,946) mined by stripping in 1914 and 7 times that mined in 1915 (2,831,619 tons). The coal mined by stripping represented 0.6 per cent of the total bituminous product of the United States in 1915 and 4 per cent in 1928. In this same period the increase in the per cent of total product mined by stripping in certain States was very marked as may be seen in the following table, which shows percentages of total product mined by stripping in 1915 and 1928 for the States where strip mining is important, and for the country as a whole.

<sup>1</sup> United States. Department of Commerce. Bureau of Mines. Economic paper 11: The economics of strip coal mining, by O. E. Kiessling, F. G. Tryon, and L. Mann.

CHANGE IN PER CENT OF TOTAL BITUMINOUS OUTPUT MINED BY STRIPPING FOR  
PRINCIPAL STATES PRODUCING FROM STRIP MINES AND FOR THE UNITED  
STATES, 1915 AND 1928

State	Per cent of total output mined by stripping		State	Per cent of total output mined by stripping	
	1915	1928		1915	1928
United States.....	( <sup>1</sup> )	4	Montana.....	( <sup>2</sup> )	36
Missouri.....	17	48	Indiana.....	4	29
North Dakota.....	0	46	Ohio.....	1	15
Kansas.....	11	43	Illinois.....	1	8

<sup>1</sup> 0.6 per cent.

<sup>2</sup> Less than 1 per cent.

In the paper under review it is brought out that the expansion in strip mining is due to the economic pressure of shifting prices and wage rates, as well as to technical improvements in mining methods. During the World War, owing to the scarcity of coal, great impetus was given to this branch of the industry. At that time strip mines in certain localities even received somewhat higher prices for their product than did deep mines, partly because, as new strip mines opened the coal was offered on the open market, operators not having agreed to supply given quantities to customers under contract. Throughout the postwar boom period the strip-mined product continued to be sold advantageously, and during the depression which began in 1921 and periodically ever since 1923 has gripped the coal industry, strip-mine owners have succeeded in so reducing their costs of production and improving the quality of their coal as to make it possible to place their product in competition with deep-mined coal at a somewhat lower price.

#### Elements of Cost Saving

STRIP MINING has certain inherent advantages over deep mining as regards cost saving. For example, the cost of mine timbering is eliminated, ventilation is unnecessary, and larger mine cars and locomotives may be used in strip mines than in underground workings. Influential also in reducing costs is the fact that only a comparatively short time elapses between opening a strip mine and securing maximum daily production. Once a strip mine is exhausted the operator may salvage a large part of his investment by moving his steam shovel and other machinery.

#### Labor Aspects of Strip Mining

OF EVEN greater consequence in reducing costs is the saving of labor in strip mines. In 1928 the average output per man per day employed in power-equipped strip pits was 13 tons. The average in deep mines was 4.6 tons in that year. Stated in another way, only 0.65 man-hour was required to produce a ton of coal in strip mines as against 1.75 man-hours in deep mines.

The following statement, from the report, shows the average number of tons per man per day produced from bituminous strip mines in the United States, by years, from 1914 to 1928.

	Tons per man per day		Tons per man per day
1914-----	5. 1	1922-----	8. 1
1915-----	5. 9	1923-----	9. 3
1916-----	6. 7	1924-----	9. 9
1917-----	6. 6	1925-----	11. 2
1918-----	7. 0	1926-----	11. 2
1919-----	6. 4	1927-----	11. 0
1920-----	7. 2	1928-----	13. 0
1921-----	8. 3		

It will be noted that the rate of increase in output per man per day has been greatly accelerated since 1920. This is stated to be due in part to the inclusion of the large stripping operation in the Rosebud field of Montana, where an average of 48 tons of coal per man per day is mined.

Operators of power shovels in strip mines are highly skilled workers and hence highly paid, but a good many unskilled workers are also employed and it is reported that these men are sometimes paid less than underground workers. It is also pointed out that the great expansion in stripping since 1921 has come in the Mississippi Valley, a largely unionized territory, where wages in deep mines have been high and where, because of the high union scale, the operators have increasingly resorted to mechanical means of mining.

It is shown that the strip mines have been relatively freer from strikes than the deep mines, partly because in some otherwise union fields the strip mines were on an open-shop basis and partly because in other fields the owners frequently continued to operate on temporary agreements, pending a settlement of the strike in the deep mines.

#### Improvements in Operating Efficiency

THE GROWTH in mine efficiency, while important in deep mines, has been specially marked in strip mines. The rapid advancement of technique in strip mining is attributed in some measure to the fact that "the strip operator has been less restrained by the hand of tradition, which rests heavily on underground mining, and has been free to mechanize as the opportunity arose."

Important among the mechanical inventions that have made for greater efficiency in strip mining is the power loading machine. The mechanized loader is now almost universally used and usually consists of a revolving shovel that follows directly behind the stripping shovel. Larger and more powerful shovels are now in more general use than was true some years back. In 1915 the average tonnage of coal handled per power shovel of all types was 164 tons, while in 1928 it was 276 tons. Eliminating the shovels used in small pits and basing the average upon the results obtained in the 15 largest operations, the average tonnage of coal per shovel rose from 230 tons in 1915 to 416 in 1928. As the shovels increased in size, they were also made more flexible in operation. In the newer pits preference for electrically driven power shovels in place of steam shovels has also developed, and more than one-third of the output is now stripped by electric equipment.

Flexibility of operation has been furthered by the adoption of crawler, or caterpillar, traction for all forms of shovels and drag lines. By the use of caterpillar mountings it has become possible to move



shovels into new locations in a shorter time than was formerly possible, and in this way time lost in moving machinery is kept at a minimum.

Successful introduction of large-type drag lines has been only slightly less spectacular than that of large shovels. The drag line precedes the power shovel, removing the overburden or stacking the waste so as to make way for the shovel, which then cuts the coal. The work performed by the drag line is described as follows:

By removing over a broad area roughly the upper third either of the overburden or the spoil bank, the drag line greatly increases the stacking range and hence the efficiency of the stripping shovel; it thus permits operation under conditions that would otherwise be exceedingly difficult and costly. The large-type drag line can be readily converted into a shovel whenever the engineering requirements of the particular operation make such a conversion desirable.

The choice of haulage equipment, tracks, and location of tipples so as to minimize the haul of the mined product have all been the subject of special study, with resultant improvement. In the haulage systems, as in other branches of the work connected with strip mines, an effort has been made to use a minimum of manual labor. At present, moving track, an operation that must be performed frequently, is done in most pits by means of caterpillar tractors that either shove or pull the track to the place where needed.

Mention should be made of the fact that the use of liquid oxygen explosives for blasting the overburden has served to increase efficiency. Where coal, as well as the overburden, is blasted it has been found effective to channel the coal seam, before shooting the coal, by means of a device similar to a coal undercutting machine. In this way the explosive becomes more effective and a relatively larger proportion of lump coal is obtained than is possible without resort to channeling.

Mechanical improvements have made it possible to operate at strip mines without frequent stoppages because of weather conditions. This has been brought about by careful planning for handling drainage. The fact that shovels may be used two or even three shifts a day, if the market warrants, is another advantage. In strip mines this may be done without seriously upsetting the life of the mining community, because a large body of workers is not needed to keep the mine in operation.

#### Other Improvements

STRIP-MINE operators have not only introduced numerous technical improvements that make it possible to produce coal at lower cost than has been possible in deep mines, but have also improved the quality of their product. Adequate preparation plants have been installed in order that the coal might be properly prepared. Advances have also been made in cleaning the surface of the coal seam before loading.

Improvement in the inherent quality of the coal stripped has come about because, as the coal near the surface has become exhausted, coal under deeper cover, and therefore of better quality, has been stripped. It is stated that "there may be no great difference between coal stripped from under 35 feet of cover hundreds of yards from the outcrop and coal mined from a 75-foot shaft."

### Prospects of Strip Mining

THE stripping industry has been characterized by growing mechanical efficiency and better preparation. Bituminous coals of all ranks are now produced from strip mines, and the quality of the product has improved as the depth of cover increased. While no forecast is made, in the paper under review, as to the growth that may be expected in this branch of the industry, it is stated that no immediate limit to the expansion of stripping is seen. The future of stripping is said to depend more on the economic competition of other coals than on physical obstacles to stripping.

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### Federal Council on Personnel Administration

THE creation of a Council on Personnel Administration was announced by President Hoover on April 27, 1931.<sup>1</sup> This newly appointed body is composed of the members of the Cabinet and the heads of independent agencies. The president of the Civil Service Commission is the chairman of the council and its director is the director of research in personnel administration and president of the Personnel Research Federation.

The objective of the organization is to induce an even higher class of men and women to take up Government work, to assure them improved facilities for development and advancement, and to eliminate the very great labor turnover resulting from the lack of career opportunities and from the failure to coordinate the various services in handling personnel problems.

The initial move in this extensive program, as developed by the director, will be to ascertain the existing personnel practices of the United States Government, "to serve as a basis for improvements in selection, flexibility of registers, announcements, transfers, promotions, training, and coordination of personnel activities and administration, and to indicate the extent to which the Government service does offer or can be made to offer, partial or permanent careers."

Expert personnel men in the Government service are to be appointed on committees to aid in the working out of plans and conducting projects indorsed by the council. With a view to insuring the cooperation of industry, organized labor, and educational institutions, several advisory committees have been set up. Cordial approval of this program has been expressed by Federal employees and officials, by educational institutions preparing technicians for Government service, and by business leaders. The findings of this investigation, the Personnel Service Bulletin of May 31 states, will benefit personnel practice not only in the Federal Government departments but also in industry and education.

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### Annual Meeting of Governmental Officials in Industry

THE eighteenth annual meeting of the Association of Governmental Officials in Industry of the United States and Canada convened in Boston, Mass., May 18 to 22, 1931.

<sup>1</sup> Personnel Research Federation. Personnel Service Bulletin, New York, May, 1931.

The convention was opened by Pres. W. A. Rooksbery, commissioner of the Bureau of Labor and Statistics, Arkansas.

Charles E. Baldwin, assistant commissioner United States Bureau of Labor Statistics, reported the status of safety codes in the various States. A report on American Standards Association projects was made by Cyril Ainsworth, assistant secretary American Standards Association, of New York.

The session of Tuesday was devoted to child labor and was presided over by Miss Maud Swett, field director of the woman and child labor department, Wisconsin. Anne S. Davis, director of the vocational guidance bureau, Chicago Board of Education, cited some of the phases of the recent White House conference on child welfare.

The subject: "What do accident records indicate is happening to minors under 18 employed at hazardous occupations," was discussed by James E. Reagin, chief inspector, Industrial Board of Indiana. Reports were also made by representatives regarding the extent to which the recommendations of the White House conference have been carried out, and also what is happening to employed children under 18, and the measures taken to protect them by the various States.

The Wednesday sessions were devoted to the subject of Employment, with Dr. E. B. Patton, of New York, and H. C. Hudson, general superintendent, Ontario offices, Employment Service of Canada. The following subjects were considered by the convention: "How to Stabilize Employment," presented by Edwin S. Smith, of Wm. Filene Sons Co., Boston; "Unemployment Remedies," by Dr. William T. Foster, of the Pollak Foundation for Economic Research; "Employment Statistics," by Mary Van Kleeck, director of industrial studies, Russell Sage Foundation, New York; "Relief of Unemployment in the United States and Europe," by Mary B. Gilson, of the Industrial Relations Counselors (Inc.), New York; and the "Work of the President's Committee on Unemployment," by Fred C. Croxton, Ohio, member of that committee.

Industrial safety was considered at the Thursday morning session, in charge of E. Leroy Sweetser, of Massachusetts. "Industrial Safety by an Employer of Labor," prepared by John F. Tinsley, vice president and general manager of the Crompton & Knowles Loom Works, Worcester, Mass., was read by Harold L. Nickerson, assistant to the superintendent of the same company. Mr. James L. Gernon, director bureau of inspection, Department of Labor, New York, discussed the subject "What I Would do, Based on my Experience, to Make Work Places Safe were I Employer or Owner."

Mr. Lewis E. MacBrayne, general manager Massachusetts Safety Council, explained how the Massachusetts Safety Council assists the department of labor and industries of the State. "The Organization and Operation of a State Factory Inspection Service" was the subject of the paper delivered by Alfred Briggs of the American Association for Labor Legislation. The afternoon session considered the general subject of industrial diseases. The chairman of this meeting was John Roach, deputy commissioner of labor, New Jersey. Mr. Roach also led in the discussion of the papers delivered by the following speakers: Dr. W. Irving Clark, of Norton Co., Worcester, Mass., "Dust Hazards and the Prevention of Injury from the Same"; Dr.



Jos. C. Aub, associate professor of medicine of Harvard University, "Lead Poisons"; and Dr. Leonard Greenberg, associate sanitary engineer, United States Public Health Service, "Dangerous Chemicals."

The following officers were elected for the coming year:

*President*, E. Leroy Sweetser, commissioner Department of Labor and Industries, Massachusetts.

*First vice-president*, Dr. Eugene B. Patton, director Bureau of Statistics and Information, Department of Labor, New York.

*Second vice president*, T. E. Whitaker, commissioner Industrial Commission, Georgia.

*Third vice president*, A. W. Crawford, deputy minister of Department of Labor, Ontario, Canada.

*Fourth vice president*, Edward F. Seiller, chief labor inspector, Kentucky.

*Fifth vice president*, Mrs. Isabelle M. Summers, director Bureau of Women and Children, New Jersey.

*Secretary-treasurer*, Miss Louise E. Schutz, superintendent Division of Women and Children, Minnesota.

It was voted to hold the 1932 meeting in Buffalo, N. Y.

The following resolutions were adopted:

#### *Public Employment Offices*

*Resolved*, That the association places itself on record as favoring Federal cooperative supervision and financial aid in the development of State employment offices rather than an independent system of Federal employment offices.

#### *Cooperation on Child-labor Standards*

*Resolved*, That the Association of Governmental Officials in Industry of the United States and Canada hereby approves cooperation with the committee on the regulation of the employment of minors in hazardous trades, organized by the Children's Bureau on the recommendation of the White House conference to collect and analyze information which may be used as a basis for the formulation of scientifically determined standards for the protection of children and young persons from occupational hazards, which standards may serve as a guide to the various States in the revision of their legislation in this field.

That this association hereby goes on record as favoring such cooperation and authorizes the executive board of the organization to appoint representatives to serve on that committee.

That this association also urges the labor officials constituting its membership to aid the committee by furnishing information and in any other way possible.

#### *Collection of Employment Statistics*

Whereas comprehensive and reliable information with reference to the trends of employment and the earnings of wage earners is essential in order that any measures adopted for the relief of the unemployed, or any plan for the issuance of unemployment insurance, or the setting up of unemployment reserve funds may be based on a full knowledge of conditions and sound judgment, be it

*Resolved*, That the Association of Governmental Officials in Industry of the United States and Canada urge all State bureaus of labor and like agencies which are not already engaged in the collection of pay-roll data from representative manufacturing establishments to undertake such collection periodically and systematically, following the so-called "standard plan" adopted by the United States Bureau of Labor Statistics and by a number of leading industrial States.

That the scope of such collection of pay-roll data be extended to include the building industry, wholesale and retail trade, public utilities, agriculture, office employment, employment in hotels and restaurants, and all other important fields of employment.

That wherever possible or expedient the results be presented, classified by sex and earnings of employees.

That efforts be made also to secure and publish periodically data with reference to employment by governmental agencies, State, county, and municipal, and

employment on public works, whether constructed directly by governmental agencies or under contract, in order to determine the extent to which such public works contribute to an increase in the amount of available employment.

#### *Child-Labor Recommendations*

*Resolved*, That the association urge the labor officials of all the States to stimulate interest in the child-labor recommendations of the White House conference and to assist in securing the adoption of those standards in their respective States.

#### *Protection of Minors in Vocational Training Courses*

*Resolved*, That the association invite the cooperation of the superintendent's department of the National Educational Association and of the State officials responsible for supervision of vocational and trade-training courses in order to insure adequate protection from industrial accidents for minors in such training courses.

### **Field of Work of Brazilian Department of Labor<sup>1</sup>**

THE February 20, 1931, issue of the Brazilian newspaper *O Jornal* contained an interview with Bandeira de Mello, director of the Department of Labor of Brazil, in which he described the principal objects of the new department.

He pointed out that all labor regulation should be based on careful study and that the Department of Labor would make inquiries into conditions in the various branches of industry and agriculture. Among the problems which call for speedy solution were mentioned hours of work, overtime, minimum wages, workmen's compensation, social welfare in all its aspects, trade-union reorganization, conciliation and arbitration boards, industrial tribunals, and the protection of women and children. The problems of public health, industrial safety, and social economics will be carefully studied and a factory inspection service and a system of labor protection will be instituted, the director said. The execution of such a program is rendered difficult by the industrial depression, but attention was called to the fact that the situation of the workers is no less difficult than that of the employers. The director concluded by saying that measures would be found to achieve these reforms without losing sight of the employers' interests.

### **Studies of Absenteeism in British Coal Mines**

TWO studies of absenteeism, one in English and the other in Scottish coal mines, show the relationship of wages, sickness, atmospheric conditions, and other factors to the rate of absenteeism among both underground and surface workers.<sup>2</sup>

In the first study the data relate to the years 1927 and 1928 and cover the absenteeism among more than 10,000 underground and 2,700 surface workers. The information on some points was comparable with a similar study made among nearly 23,000 men in 1924-1926. In the period covered by the more recent study the men were often on short time and on a lower wage scale and were working underground 8 hours instead of 7½ hours.

<sup>1</sup> International Labor Office. *Industrial and Labor Information*, Geneva, Mar. 30, 1931.

<sup>2</sup> Great Britain. Industrial Health Research Board. *Two Studies of Absenteeism in Coal Mines*. London, 1931.

The study showed that absenteeism was greatly influenced by economic conditions, for with a reduction of 32 per cent in the possible earnings of workers at the coal face the time lost from voluntary absenteeism was reduced one-half, while that lost by sickness was reduced one-fourth, but absenteeism on account of accidents was slightly increased. Among the other underground men the absenteeism from voluntary causes, sickness, and accidents fell 38, 20, and 17 per cent, respectively, when their possible earnings were reduced 24 per cent.

In both the present study and the earlier one there was shown to be a considerable increase of absenteeism on account of sickness when there was a rise in temperature in the workings, and also a marked increase in accident frequency. In both sets of figures the accident increase related chiefly to minor accidents, those causing less than 10 days' disablement being three times as numerous at an underground temperature of 81° as at one of 63°, but major accidents causing 60 days' or more disability were less frequent among workers at the face at high temperatures than at low temperatures. The increase in the number of minor accidents with high temperatures when wages are low was accounted for in an earlier study by the tendency of the workers to remain away from work and draw compensation longer when earnings are low and irregular than would be the case if employment were plentiful and earnings high. If a man receives a minor injury, he does not receive compensation until the end of three days, and it appears from the data that, either consciously or unconsciously, he is influenced to go on compensation if his occupation is unpleasantly hot and causes extra fatigue, with the result that his accident is then reported and becomes a matter of record, while in the case of major accidents which would be reported anyway there would naturally be less change in the rates as a result of less favorable working conditions.

The pressure of economic circumstances, the report states, acts in two diametrically opposed ways. Thus, both underground and surface workers who are working on short time and at a low rate of pay show a tendency to cut down the time lost by voluntary absenteeism and sickness absenteeism as much as possible and may to some extent refrain from going on accident compensation, with a resulting reduction in the figures for accident frequency. This point is indicated by the data for other underground workers, but on the other hand the data show a tendency among these workers to remain an increasing number of days on compensation pay for each accident experienced.

No great difference between the accident rates for men in the younger age groups was shown between the two studies, but an 18 per cent increase in the frequency rate and a 41 per cent increase in the severity rate was shown in 1927-28 as compared with 1924-25 for workers 50 years of age and over. Increases of 9 and 30 per cent in the frequency and severity rates, respectively, were shown for the other underground workers 40 years of age and over. It is considered that these increases may have been the result of the greater fatigue induced by the longer working-day during 1927-28. The increases related especially to men working at temperatures above 70°, and the accidents among the older men caused absences from work which were, on the average, 22 per cent greater than in 1924-25.



Voluntary absenteeism seemed to be influenced by the distance of the homes of the men from the colliery and by the distance the men had to walk underground to reach the working place. Voluntary absenteeism also varied more or less with the labor turnover, and the writers concluded, therefore, "that when the miner finds his conditions of life, both above ground and below ground, to suit him so well that he does not leave his job and try for work elsewhere, he loses but little time from voluntary absenteeism, especially if he is on short time as in 1927-28."

The effect of the provision of pithead baths upon absenteeism was investigated, the data for 5,000 men employed at two collieries before and after the introduction of the baths being compared, while two bathless collieries employing 5,600 men were used as a control. Although the evidence was not very conclusive, the provision of bathing facilities did seem to be associated with a reduction in the time lost from sickness.

In Scotland the study of the cause of the varying sickness rates in a group of seven collieries showed that in general the atmospheric conditions at the collieries with the high sickness rates were not so good as at those where the sickness rates were low, although in one district other factors such as housing, proximity of the houses to the mine, and the wetness of working places were also important. Comparison of the accident rates in the Scottish and English collieries showed that the accident frequency was lower in the Scottish mines, but that the accident severity was exactly the same, 3.3 days being lost per 1,000 hours worked in both the English and the Scottish groups of mines.

# HEALTH AND INDUSTRIAL HYGIENE

## International Typographical Union Mortality, 1930

By FREDERICK L. HOFFMAN, CONSULTING STATISTICIAN, PRUDENTIAL INSURANCE CO.

IN CONTINUATION of the annual reports on the mortality experience of the International Typographical Union, the following statistics for the year 1930 are presented.<sup>1</sup>

Table 1, following, gives the membership from 1912 to 1930, with the mortality from four selected causes per 100,000 exposed to risk.

TABLE 1.—MORTALITY FROM FOUR SELECTED CAUSES PER 100,000 MEMBERS, 1912 TO 1930

Year	Member- ship	Pulmonary tuberculosis		Cancer		Diabetes		Nephritis	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
1912 to 1918 <sup>1</sup> -----	421, 100	698	165. 7	139	33. 0	45	10. 7	298	70. 8
1919 to 1923 <sup>1</sup> -----	350, 900	514	146. 5	281	80. 1	77	21. 9	240	68. 4
1925-----	70, 372	87	123. 6	66	93. 8	12	17. 0	56	79. 6
1926-----	72, 704	87	119. 7	64	88. 0	15	20. 6	38	52. 3
1927-----	74, 829	56	74. 8	83	110. 9	14	18. 7	47	62. 8
1928-----	75, 738	74	97. 7	79	104. 3	16	21. 1	38	50. 2
1929-----	76, 015	90	118. 4	94	123. 7	12	15. 8	46	60. 5
Total, 1925 to 1929 <sup>1</sup> -----	369, 658	394	106. 6	386	104. 4	69	18. 7	225	60. 9
1930-----	77, 507	79	101. 9	90	116. 1	8	10. 3	44	56. 8

<sup>1</sup> Aggregate membership and deaths.

The table shows only slight changes in the death rates of this group. There was a reduction in the mortality from pulmonary tuberculosis from 90 deaths in 1929 to 79 deaths in 1930 and a slight decrease in deaths from cancer from 94 in 1929 to 90 in 1930. Deaths from pneumonia decreased from 109 to 92. Mortality from chronic nephritis remained practically the same.

<sup>1</sup> Data for previous years were presented in Bulletin No. 427, and in Labor Review, issues of July, 1927, April, 1928, March, 1929, and May, 1930.

The proportionate mortality for selected causes presents a somewhat different picture. The following table shows the corresponding returns on a proportionate basis for four selected causes:

TABLE 2.—PROPORTIONATE MORTALITY FROM FOUR SELECTED CAUSES, 1912 TO 1930

Year	Deaths from all causes	Pulmonary tuberculosis		Cancer		Diabetes		Nephritis	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1912 to 1918 <sup>1</sup> .....	3,338	698	20.9	139	4.2	45	1.3	298	8.9
1919 to 1923 <sup>1</sup> .....	3,447	514	14.9	281	8.2	77	2.2	240	7.0
1925.....	880	87	9.9	66	7.5	12	1.4	56	6.4
1926.....	913	87	9.5	64	7.0	15	1.6	38	4.2
1927.....	1,002	56	5.6	83	8.3	14	1.4	47	4.7
1928.....	913	74	8.1	79	8.7	16	1.8	38	4.2
1929.....	1,090	90	8.3	94	8.6	12	1.1	46	4.2
Total, 1925 to 1929 <sup>1</sup> .....	4,798	394	8.2	386	8.0	69	1.4	225	4.7
1930.....	1,129	79	7.0	94	8.3	8	.7	44	3.9

<sup>1</sup> Aggregate deaths.

The table shows that deaths from pulmonary tuberculosis declined from 8.3 per cent in 1929 to 7.0 per cent in 1930. The mortality from cancer declined from 8.6 per cent to 8.3 per cent. The mortality from nephritis declined from 4.2 per cent to 3.9 per cent.

The proportionate mortality, however, is better emphasized with reference to divisional periods of life. The following table shows the proportionate mortality in 1930 for the four selected causes:

TABLE 3.—PROPORTIONATE MORTALITY FROM SELECTED DISEASES, BY AGE GROUPS, 1930

Age at death	Deaths from all causes	Pulmonary tuberculosis		Cancer		Pneumonia		Nephritis	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
20 to 24 years.....	8	1	12.5					1	12.5
25 to 29 years.....	24	7	29.2			2	8.3		
30 to 34 years.....	32	9	28.1			7	21.9		
35 to 39 years.....	60	17	28.3	2	3.3	7	11.7	2	3.3
40 to 44 years.....	51	8	15.7	2	3.9	5	9.8	1	2.0
45 to 49 years.....	91	6	6.6	4	4.4	7	7.7	4	4.4
50 to 54 years.....	100	11	11.0	3	3.0	9	9.0	7	7.0
55 to 59 years.....	166	6	3.6	14	8.4	19	11.4	7	4.2
60 to 64 years.....	175	5	2.9	26	14.9	12	6.9	6	3.4
65 to 69 years.....	158	4	2.5	13	8.2	10	6.3	2	1.3
70 to 74 years.....	114	1	0.9	12	10.5	6	5.3	10	8.8
75 to 79 years.....	86	4	4.7	10	11.6	7	8.1	2	2.3
80 to 84 years.....	37			3	8.1			2	5.4
85 to 89 years.....	12			1	8.3	1	8.3		
90 years and over.....	3								
Not reported.....	12			4					
Total.....	1,129	79	7.0	94	8.3	92	8.2	44	3.9

Table 4 gives the deaths from all causes by divisional periods of life, for the calculation of specific death rates if required.



TABLE 4.—NUMBER OF DEATHS FROM ALL CAUSES, BY AGE GROUPS, 1925 TO 1930

Age at death	1925	1926	1927	1928	1929	1930
15 to 19 years.....	1		1			
20 to 24 years.....	8	13	14	5	7	8
25 to 29 years.....	24	22	21	23	27	24
30 to 34 years.....	32	29	34	34	33	32
35 to 39 years.....	46	41	55	36	59	60
40 to 44 years.....	50	57	47	58	57	51
45 to 49 years.....	74	77	64	78	72	91
50 to 54 years.....	92	106	123	83	101	100
55 to 59 years.....	136	124	128	130	157	166
60 to 64 years.....	117	145	150	137	158	175
65 to 69 years.....	110	107	131	128	146	158
70 to 74 years.....	90	88	114	100	138	114
75 to 79 years.....	58	61	61	56	72	86
80 to 84 years.....	27	30	30	26	34	37
85 to 89 years.....	11	11	13	14	12	12
90 years and over.....	4	2	3	3	3	3
Not reported.....	14	10	13	2	14	12
Total.....	894	923	1,002	913	1,090	1,129

Table 5 is a tabulation of all deaths reported during the year 1930, numbering 1,129, classified in accordance with the international classification of causes of death. Again, it is suggestive in this connection that during the year under review not a single death was attributed to lead poisoning, although it is possible that deaths due to lead absorption have been returned under other primary causes, particularly acute and chronic nephritis. But these show a decline during 1930 as well as during 1929. It is also highly significant that there was only one death from homicide and no deaths from suicide.

TABLE 5.—NUMBER OF DEATHS OF MEMBERS OF TYPOGRAPHICAL UNION, BY CAUSE AND AGE GROUP, 1930

International list number	Cause of death	All ages	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and over	Unknown
11	Influenza.....	3					1			1		1						
21	Erysipelas.....	3							2		1							
23	Lethargic encephalitis.....	1								1								
31	Tuberculosis of the respiratory system.....	79	1	7	9	17	8	6	11	6	5	4	1	4				
38	Syphilis.....	1					1											
41	Purulent infection, septicemia.....	10		1		2			3	1	1		2					
43	Cancer of the buccal cavity.....	2								1	1							
44	Cancer of the stomach, liver.....	14					1			3	2	1	3	4				
45	Cancer of the peritoneum, intestines, rectum.....	1												1				
46	Cancer of the female genital organs.....	1										1						
49	Cancer of other or unspecified organs.....	76				2	1	4	3	10	22	12	9	5	3	1		4
50	Benign tumors and tumors not returned as malignant.....	5					1	1		2	1							
51	Acute rheumatic fever.....	1								1								
52	Chronic rheumatism, osteoarthritis, gout.....	6				1			3		2							
57	Diabetes mellitus.....	8				1		1	1	2	1	2						
58a	Pernicious anemia.....	3							1					2				
58b	Other anemias and chlorosis.....	1											1					
60	Other diseases of the thyroid gland.....	1						1										
65	Hodgkin's disease.....	3		1						1	1							
66	Alcoholism (acute or chronic).....	1								1								
69	Other general diseases.....	1									1							
70	Encephalitis.....	1			1													
71	Meningitis.....	4	1				1	1		1								
72	Tabes dorsalis (locomotor-ataxia).....	4						1			1	2						
73	Other diseases of the spinal cord.....	3						1										
74a	Cerebral hemorrhage.....	83			2	1	2	4	6	12	11	22	10	11	2			
74b	Cerebral embolism and thrombosis.....	6					2		2	1				1				
75	Paralysis without specified cause.....	36				3	2	2	1	1	6	11	4	5				1

TABLE 5.—NUMBER OF DEATHS OF MEMBERS OF TYPOGRAPHICAL UNION, BY CAUSE AND AGE GROUP, 1930—Continued

International list number	Cause of death	All ages	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and over	Unknown
76	General paralysis of the insane	7	1		1			3	1	1								
82	Neuralgia and neuritis	2									2							
83	Softening of the brain	1								1								
84	Other diseases of the nervous system	6					1		1	1	1	2						
89	Angina pectoris	17				1			2	5	2	3	2			2		
90	Other diseases of the heart	221		1	3	7	4	18	20	39	39	45	23	13	5	2		2
91b	Arteriosclerosis	58						1	1	2	13	14	11	10	4	1	1	
91c	Other diseases of the arteries	1							1									
92	Embolism and thrombosis	13						1		2	5	1	1	2	1			
93	Diseases of the veins	1									1							
95	Hemorrhage without special cause	4					1			1		1		1				
96	Other diseases of the circulatory system	2						1			1							
97	Diseases of the nasal fossae and their annexa	1							1									
99a	Acute bronchitis	1											1					
99c	Bronchitis, unspecified	1									1							
100a	Broncho-pneumonia	6				1	1	2				1		1				
101a	Lobar pneumonia	6			1				1	1	1							
101b	Pneumonia, unspecified	86		2	6	7	3	7	8	18	11	10	6	7		1		
102	Pleurisy	3					1					1	1					
103	Congestion and hemorrhagic infarct of the lung	2														1	1	
105	Asthma	5							1	1	1		1		1			
107	Other diseases of the respiratory system	2						1		1								
109	Diseases of the pharynx and tonsils	1										1						
111a	Ulcer of the stomach	8	1		1	1			1	1	2			1				
112	Other diseases of the stomach	6						2	1	3								
114	Diarrhea and enteritis	2						1				1						
117	Appendicitis and typhlitis	11	1	1	1			3		3	1							1
118a	Hernia	1												1				
118b	Intestinal obstruction	4								2		1						1
119	Other diseases of the intestines	1											1					
120b	Cirrhosis of the liver	8						2	1	1	3	1						
123	Biliary calculi	2							1			1						
124	Other diseases of the liver	4				1	1		1	1								
126	Peritonitis without specified cause	4				1			2			1						
128	Acute nephritis	1						1										
129	Chronic nephritis	43	1			2	1	3	7	7	6	2	10	2	2			
131	Other diseases of the kidneys and annexa	9						2	1	1			4		1			
133	Diseases of the bladder	8				1					3	1		1	1			1
135	Diseases of the prostate	1								1								
151	Gangrene	2							1			1						
153	Acute abscess	1									1							
154	Other diseases of the skin and annexa	7					2	1	1		1		1		1			
155	Diseases of the bones	1											1					
164	Senility	17							1				3	4	5	4		
175	Poisoning by food	1							1									
177	Other acute accidental poisonings	1								1								
179	Accidental burns	1					1											
181	Accidental absorption of irrespirable, irritating or poisonous gas	2			1		1											
182	Accidental drowning	4		1		1		1	1									
188b	Automobile accidents	9		2	1		2		1		1	1			1			
188d	Airplane and balloon accidents	1						1										
194	Excessive heat	1											1					
199	Homicide by other means	1			1													
201	Fracture (cause not specified)	6			2	1		1									2	
202	Other external violence	32	1	3	2	2	2	3	2	4	2	3	2		4	1		1
205	Cause of death not specified or ill-defined	124	1	5		8	8	13	10	22	18	10	15	9	3	1		1
	Total	1,129	8	24	32	60	51	91	100	166	175	158	114	86	37	12	3	12

### Danger of Delayed Development of Pneumoconiosis

THE danger of the delayed development of silicosis, either with or without tuberculosis involvement after short exposure to silica dusts, is pointed out in an article<sup>1</sup> in a recent issue of the Journal of the American Medical Association.

It has been the general conclusion that, although there is great variation in individual susceptibility and consequently in the length of exposure necessary to produce clinical and roentgenographic evidence of the existence of silicosis, it is rare for the disease to develop in persons who have not been exposed for many years. This conclusion is due to the fact that practically all of the studies of silicosis have been made among groups of men still employed in dusty trades. Such studies have shown an average duration of exposure of approximately 10 years. Statistics of this kind, however, do not show the late effect of short exposures, that is, among men who change to non-dusty trades without having developed symptoms of the disease. Several isolated cases of silicosis or silicosis and tuberculosis which developed long after the original exposure ceased have been reported by different writers, among them being a number of South African miners, who showed no evidence of silicosis when they left work to go to war but had definite symptoms of silicosis when they returned several years later.

In the present article the writers report four cases of silicosis or silicosis and tuberculosis which developed many years after exposures which were relatively short. In the first case there had been an exposure of only four months in drilling in a lead mine 23 years before the appearance of symptoms which started with a slight dry cough. Although the Röntgenograms showed spots throughout both lungs, there was no definite evidence of tuberculosis and many examinations of the sputum failed to show tubercle bacilli. The rapid development of severe symptoms which included an afternoon fever, epigastric distress after meals, and progressive loss of weight followed a bad cold which settled in the chest.

The second case was that of a hotel porter who had been employed for 2 years, 16 years before the beginning of symptoms, in a foundry in which his job was cleaning bathtubs with a sand blast. His symptoms, which began with a slight cough, were typical of silicosis and tuberculosis. As in the previous case an infection seemed to be the precipitating factor. The Röntgenogram was characteristic of third-stage pneumoconiosis and the infection was definitely tuberculous.

In the next case a laborer developed symptoms of silicosis 14 years after an exposure of 4 years during which he had worked as a grinder in a knife shop without taking any precautions against the dust hazard. Since that employment he had been engaged in nondusty work. He had been in good health throughout the years since his first employment until he developed an acute upper respiratory infection of the influenza type. This developed into an extensive bronchitis and X rays taken at this time showed extensive pneumoconiosis, but there was no evidence of tuberculosis. As in the other two cases the onset of symptoms coincided with an acute respiratory infection.

<sup>1</sup> The Journal of the American Medical Association, June 6, 1931 (pp. 1938, 1939): "Pneumoconiosis," by James A. Britton, M. D., and Jerome R. Head, M. D.



The remaining case was that of a laborer who had worked as a knife grinder on a sandstone for 10 years, after which he had been employed in work which did not present a dust hazard. But at the end of 10 years, during which he had shown no symptoms of silicosis, he was exposed to a tubercular infection, the onset of his symptoms coinciding with the infection with the tubercle bacillus.

In conclusion, the writers state that while most of the clinical and statistical studies of silicosis have been made on persons still employed in dusty trades, the present report of four cases of silicosis or silicosis and tuberculosis which developed many years after the occurrence of relatively short exposures to silica dust suggests the necessity of revising the opinion as to the length of exposure necessary to produce the disease. From the history of these cases it seems evident that, even during the course of short exposures, there may be sufficient dust deposited in the lungs to set up a progressive fibrosis which does not become sufficiently extensive to produce symptoms until after the lapse of many years. This indicates, it is believed, that the reason that men in the work do not develop symptoms until there have been many years of exposure is not because that length of exposure is necessary but because it takes a long time for the disease to develop.

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### A Windowless Factory <sup>1</sup>

**A**N ENTIRELY new type of manufacturing building is being constructed by the Simonds Saw & Steel Co., Fitchburg, Mass. The building, which will take the place of three present factories, will have no windows or skylights, and will be entirely lighted by electricity which will give uniform lighting without glare throughout the plant.

The company chose the present time to build, as the management was convinced that the present depression had reached its lowest point and that recovery would soon be well under way, and also for the reason that it has always been the policy of the company to carry out its building and expansion work when business is dull and prices low. The present type of building was decided upon as the result of research, which showed that in addition to providing practically ideal conditions of illumination and ventilation, as well as other features making for the health and comfort of employees, it would increase production efficiency at least one-third.

Under ordinary factory conditions daylight provides far from satisfactory illumination, since it is constantly changing and it is only for short periods each day that each machine, desk, or workbench receives the amount of illumination which enables workers to do their best work with the least eyestrain and effort. Indoor daylight is more costly than artificial light since windows occupy valuable wall space and increase heating cost, and their washing is a fairly large item of expense. Artificial light, on the other hand, can be distributed evenly and constantly, freed from glare, and given daylight color. It can even provide the ultra-violet rays which are largely filtered out of sunlight when it passes through window glass.

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<sup>1</sup> Metropolitan Life Insurance Co., Executives Service Bulletin, February, 1931: "The Simonds windowless factory," by Alvan T. Simonds and Gifford K. Simonds.

The lighting system in the new Fitchburg plant is designed to give uniform intensity of 19-foot candles on the working level, which is about three times the intensity in most offices.

Atmospheric conditions within the plant will be regulated much more strictly than is possible in the ordinary plant with uncontrolled leakage of air through windows. The temperature will be controlled between fixed limits, and every 10 minutes more than 500,000 cubic feet of washed air will be delivered throughout the building. In hot weather the air will be cooled through evaporation, and in cold weather it will be heated and sent through the building by means of overhead ducts. The heating system will be regulated by thermostatic control, and fumes, gases, and excess heat will be removed through underground ducts.

Factory noises and vibration will be controlled or eliminated. Walls, ceilings, and floors will be treated acoustically and large machines and drop hammers will be isolated, and there will be silencing processes for machines, embodying the same principles as Maxim silencers in firearms. The floor will have a concrete base with an acoustical wood block, and machinery causing noise and vibration will be separated from the body of the floor and cushioned with cork pads. By these methods it is expected that fully 60 per cent of the noise will be eliminated.

The walls and ceiling will be painted in blue, green, and white, chosen for cheerfulness or light-reflecting properties, and machinery will be painted an orange color, as this improves the visibility of machine parts and is thus an aid in the prevention of accidents.

The layout of the plant will provide for straight-line production, and has been planned to keep fatigue at a minimum. All unnecessary motions will be eliminated and the physical efforts of the workmen reduced as much as possible. Although the new factory will provide more healthful working conditions, it is not a philanthropic project; the whole objective is improved productivity. It is planned to run the plant for two 8-hour shifts, which is impossible in the ordinary daylight factory. The shifts will work from 7 a. m. to 3 p. m. and from 3 p. m. to 11 p. m., which will permit all employees to have their recreation out of doors during the daylight and enjoy practically normal hours of sleep at night.

## LABOR LAWS AND COURT DECISIONS

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### Injury in Course of Illegal Employment not Compensable in New Jersey

**A** CONTRACT to act as bartender for the unlawful sale of liquor is an illegal contract and the employee is without the benefit of the workmen's compensation law, according to a recent decision of the New Jersey Court of Common Pleas. (*Snyder v. Morgan*, 154 Atl. 525.)

George E. Snyder was employed by Frank Morgan as a bartender in "Kay's Club," which was owned and operated by Morgan. On September 6, 1929, Snyder was hit in the face with a bottle when he refused to serve five or six "ruffians" who invaded the barroom where he was employed. As a result he suffered the loss of his left eye and for this injury he filed a petition for compensation. The petition was dismissed by the New Jersey Workmen's Compensation Bureau, and an appeal was taken to the Court of Common Pleas of New Jersey.

Snyder alleged that he was employed merely to sell near beer; however, the court found the evidence convincing that the contract of hire was to dispense liquor in violation of the law. The court said that such a "contract to act as bartender for the sale of liquor was an illegal one, and both the employer and employee were subject to indictment and conviction for conspiracy to violate the prohibition laws."

The court cited the case of *Hetzel v. Wasson Piston Ring Co.* (98 Atl. 306), in which the court held that the workmen's compensation act did not apply to contracts which the legislature had already prohibited the parties from making. The court also quoted in part the opinion of Chief Justice Gummere, speaking for the Court of Errors and Appeals of New Jersey in the case of *Boyle v. Van Splinter* (127 Atl. 257), as follows:

"It is only in those cases where the contract of hiring is valid that the workmen's compensation act is applicable. Contracts which are prohibited by express legislative enactments do not come within the cognizance of the bureau."

Snyder contended that he was entitled to prevail in his compensation claim under Chapter 257 of the Public Laws of New Jersey, 1922. As to this the court said: "This act provides a right of action to any person or to the estate of any decedent who sustains an injury or damage caused by any intoxicated person or by reason of the intoxication of, or the sale of any intoxicating liquor to, any person in violation of law. Obviously it does not affect the workmen's compensation acts, but applies to the long and dreadful train of injuries and damages which are likely to result either to the consumer or to innocent third persons from the illegal dispensation of liquor."

The judgment of the workmen's compensation bureau, dismissing the petition, was therefore affirmed.



### Railroad not Negligent in Maintaining Semaphore near Track in South Carolina

**T**HE United States Supreme Court recently held, in a suit by an administrator to recover for the death of a switchman under the Federal employers' liability act, that the Atlantic Coast Line Railroad Co. was not negligent in maintaining a semaphore 4 feet 10 inches from the outer edge of the track. (*Atlantic Coast Line R. Co. v. Powe*, 51 Sup. Ct. 498.)

The facts of the case showed that George A. Marshall, a switchman, was killed when he was struck by a semaphore while on the outside of a moving railroad car. The evidence also disclosed that the South Carolina Railroad Commission had previously made an order prohibiting structures nearer than 4 feet from the outer edge of the main or side track. It was alleged by the administrator of the deceased employee that the railroad company was negligent in maintaining the semaphore too near the track, and thus causing the death of the switchman. The Supreme Court of South Carolina rendered a judgment in favor of the administrator and the case was carried to the United States Supreme Court by the railroad company, contending there was no evidence of its negligence and that Marshall should be considered to have assumed the risk of the supposed cause of his death.

Mr. Justice Holmes, delivering the opinion of the court, said in part:

The general principles laid down with regard to mail cranes in *Southern Pacific Co. v. Berkshire* (41 Sup. Ct. 162) and *Chesapeake & Ohio R. Co. v. Leitch* (48 Sup. Ct. 336) apply equally to semaphores. It is impracticable always to set such structures so far away as to leave no danger to one leaning out, and in dealing with a well-known incident of the employment, adopted in the interest of the public and of the employees, it is unreasonable to throw the risks of it upon those who were compelled to adopt it.

The semaphore in this instance was 4 feet 10 inches at its base from the outer edge of the track and probably a little more at 4 feet above the top of the rail. An order of the South Carolina Railroad Commission, made, as it states, in consideration of the safety of the public and employees of the road and of the necessity for employees to give and receive signals, provides that no structure be allowed nearer than 4 feet from the outer edge of the main or side track, measurement being made 4 feet above the top of the rail. It will be seen that the railroad company in this case more than complied with the order. It is true that 4 feet was a minimum distance, but it satisfied the requirement of the commission, and it would be going far to say that the railroad company was not warranted in supposing that it had done its duty, so far as the commission was concerned, when it put the semaphore 4 feet 10 inches away. Marshall from his previous experience probably knew of the semaphore as he was required to do by the rules of the road. It was shown that some other semaphores were farther from the track, but the circumstances do not appear, and there is nothing to show that in this case the petitioner could have made the position safer than it was, except by changing the place of the track.

The judgment of the lower court was therefore reversed.

## LABOR AWARDS AND DECISIONS

### Recent Decisions of Industrial Commission of Colorado

#### Journeyman Tailors—Denver, Colo.

**T**HE Industrial Commission of Colorado was notified by M. Binstock & Co., on November 13, 1930, that that firm had posted in its tailor shop notice of a 10 per cent reduction in the wages of all employees, effective in 30 days. The Journeymen Tailors' Local No. 3, in behalf of its members employed by the firm, protested the wage cut and requested a hearing before the commission.

At a hearing held on December 8, 1930, the employing company contended that it was losing money every day and that the proposed reduction was necessary if it was to continue to carry on its business. The union, on behalf of its members, contended that the men were entitled to their present wage and that it was of the opinion that the employer could continue to operate upon the same wage basis as heretofore.

On December 15, 1930, the Industrial Commission of Colorado rendered the following decision:

When we consider the industrial conditions in the United States at this time the commission is of the opinion that this is the wrong time to either increase or decrease wages and would respectfully suggest to the employer as a solution of the problem that he maintain the present wage scale and have his employees work part time, if it is necessary for him to do so. We believe this will be much better than making a general reduction in the wage scale at this time.

#### Carpenters and Joiners—Denver, Colo.

ON MARCH 16, 1931, the industrial commission was notified by the Mead & Mount Construction Co. of an intended reduction from \$10 to \$7 per day in the scale of wages of the carpenters employed by it in the city of Denver. The Carpenters and Joiners' Local No. 55 protested to the commission against the proposed reduction.

A hearing was held on April 18, 1931, at which the employer contended that it was necessary to reduce wages to meet the competition of employers who are employing nonunion labor at a rate lower than the union scale; and that the proposed reduction would reduce the cost of building about 10 per cent, thereby materially increasing building activity in Denver. The union stated that its members have worked less than half time during the past 12 months and that it is impossible for them to live decently on the amount of money they have received. It contended that the wages paid the carpenters in Denver is not too much for skilled labor of this kind; and that good wages as a rule create good business conditions.

On April 22, 1931, the commission rendered the following decision:

The commission is sometimes inclined to believe that many employers are taking advantage of the present depression and the unemployment situation to demand a reduction in the wages of labor.

The commission is of the opinion that labor is not a commodity like corn and wheat, and wages should not be regulated alone by the law of supply and demand. A very large majority of workmen have nothing but their labor to sell and we believe that every man who gives a fair day's work is entitled to a living wage. By a living wage we mean a wage sufficient to supply a decent living for himself and family; enough to educate his children in the manner in which every American child should be educated; enough to secure a little pleasure in life, and something left to set aside for the day when old age comes and he can toil no longer.

The commission is further of the opinion that if we are to maintain the American standards of living it is necessary that employees receive a living wage—a living wage means more for the prosperity of this country than large dividends and big bank accounts. It seems to this commission that living wages create an increased purchasing power, and when labor is paid a fair wage and can get a decent living, the country is always prosperous. Reducing the wages of labor will delay the return of better times and will not assist in any way in clearing up the present economic situation. We do not believe that this is the time to ask for reductions in wages, nor do we believe that skilled labor of this kind should be required to accept a lower wage.

Therefore, it is the decision and award of this commission that the request of the employer herein for a reduction in the wages of carpenters from \$10 per day to \$7 per day be not granted.

#### Common Laborers—Denver, Colo.

ON MARCH 27, 1931, the L. F. Dow Co. notified the Industrial Commission of Colorado that it would be necessary to reduce the wages of its common labor from \$5 to \$4 per day. On April 2, 1931, the secretary of Local No. 340 of the International Hod Carriers, Building and Common Laborers wrote the commission a letter protesting against the wage reduction.

At the hearing held on April 17, 1931, the employer contended that it was unable to continue to pay \$5 per day to common labor and at the same time compete with contractors employing nonunion labor at a wage as low as \$2.50 per day. The employees contended that \$5 per day was a living wage only if they were employed full time, that members of their union had not been employed more than half time during the last 12 months, and that the amount received by them during that period had not been sufficient to provide a decent living for a man and his family.

The decision of the commission, dated April 20, 1931, is as follows:

This commission has given very careful and serious consideration to all the evidence introduced at this hearing. It seems to this commission that every man who labors is entitled to a living wage in exchange for his labor.

It was stated during the hearing that some of the employers employing nonunion labor paid as low a wage as \$2.50 per day for common labor. The commission is of the opinion that any employer who will ask, or allow, a man to work for as low a wage as \$2.50 per day has forgotten something about human rights. Men who labor and produce the wealth of the Nation are entitled to a fair share of that which they produce; to a living wage, at least. During the present depression, where men are employed less than half time and can not earn a living wage or enough to supply their families with a decent living, a reduction in wages would be unfair and unjust to say the least, and cause more suffering and hardship.

Therefore, it is the award and decision of the commission that the demand of the above-named employers for a decrease in wages be refused and that no decrease in wages be granted the employers at this time.



# LABOR ORGANIZATIONS

## Organization of Board of Trade Claims for Adjusting Jurisdictional Disputes in the Building Trades

**T**HE Board of Trade Claims for adjusting jurisdictional disputes in the building trades was organized at Washington, D. C., on March 3, 1931.

The following were named as members of the board to represent the employees: M. J. McDonough, president of the building trades department of the American Federation of Labor; John J. Hynes, sheet-metal workers; P. J. Morrin, structural-iron workers; L. P. Lindeloff, painters and decorators; Arthur M. Huddell, hoisting and portable engineers, and W. J. McSorley, lathers' union. The following were named to represent the National Association of Building Trades Employers: O. W. Rosenthal, Chicago; David T. Riffle, Pittsburgh; C. G. Norman, New York; W. P. Carroll, Cleveland; James J. Scully, Boston; Max Baumann, New York; and E. M. Craig, Chicago.

The agreement establishing the board was reached after many conferences between representatives of the National Association of Building Trades Employers and the building-trades division of the American Federation of Labor. The agreement, effective to December 31, 1932, contains the following preamble:

The construction industry is constantly confronted with many and complex problems.

Conditions in the industry are ever changing, due to improved and changing methods, materials, engineering, design, etc.

These changing conditions present peculiar and unusual problems to both employer and labor.

Labor in the construction field is subdivided into trade groups, each of which has its own particular work to perform. This field labor becomes skilled in its particular class of work by application and study.

The question of which trade shall be charged with the responsibility of doing certain work upon a construction project when new materials and methods are presented is at times difficult to determine.

However, the insistence by two or more trades that the placing of the material or manufactured product, or that the work to be performed is properly theirs, and unwillingness on the part of any trade to concede to another the right of erection or installation makes it necessary that there be set up a tribunal or board that shall determine such matters and which shall also determine whether the issue has already been disposed of by decision or otherwise, and whether there shall be further consideration of the issue.

The desire on the part of the entire industry and the public that means be found whereby these costly and troublesome questions may be amicably, economically, and expeditiously disposed of that construction may proceed uninterruptedly, and with the distinct understanding on the part of the parties hereto that there shall be no abandonment of the work or refusal to do the work pending a decision to be arrived at in the manner herein set forth, prompts us to set up and make effective this Board of Trade Claims.

This board, which takes the place of the old National Board for Jurisdictional Awards, abolished in 1927, is a tribunal for the adjustment of jurisdictional disputes between the building trades. It comprises the executive council of the building-trades department of the American Federation of Labor and an equal representation of members of the National Association of Building Trades Employers. The board will meet at least four times each year and also at the call of the chairman, with the approval of a majority of both sides of the board.

The board will hear petitions of international labor unions only, it being stipulated in the agreement that local and sectional arguments must be presented to the international officers for their decision on referring the matter in dispute to the board. If the claim has not previously been determined, the question is set for arbitration and the parties involved are requested to appoint their respective arbitrators; these arbitrators must select an umpire within 10 days. The findings of the arbitrators are to be reported to the Board of Trade Claims within 10 days after hearing the evidence and arguments.

If in the judgment of the board a decision is clear, concise, and in line with the question as stated, the board shall approve the decision and shall set a date upon which such decision shall become effective, which date shall not exceed 90 days thereafter. If the board does not accept the decision it shall immediately be sent back to the arbitrators for further consideration.

The plan of the board provides that if either party to the arbitration fails to comply with the decisions of the board that party shall be disciplined by its respective organization.

This agreement also provides that—

Inasmuch as the purpose of this agreement is to maintain peace and harmony in the industry in the public interest and to foster its economic welfare, it is recommended to architects, engineers, builders, owners, contractors, and others concerned with construction work that the decisions and findings handed down by this National Board of Trade Claims be observed in the drawing up of specifications and in the making of contracts. A strict observance of this will contribute much to the advancement of the industry and will give to the public the necessary assurance in their building operations.

The building trades department of the American Federation of Labor sent the following notice to all international unions affiliated in the building trades department: "You are informed that under the agreement all international unions affiliated in the building trades department must necessarily become signatories to the agreement."

The following international unions are affiliated in the building trades department:

- International Association of Heat and Frost Insulators and Asbestos Workers.
- International Association of Bridge and Structural Iron Workers.
- International Union of Elevator Constructors.
- International Union of Steam Engineers.
- Granite Cutters' International Association of America.
- International Hod Carriers, Building and Common Laborers' Union.
- Wood, Wire and Metal Lathers' International Union.
- International Association of Marble, Slate, and Stone Polishers, Rubbers and Sawyers, Tile and Marble Setters' Helpers.
- Sheet Metal Workers' International Association.
- Operative Plasterers and Cement Finishers' International Association.
- Brotherhood of Painters, Decorators and Paperhangers.
- United Association of Journeymen Plumbers and Steam Fitters.
- United Slate, Tile and Composition Roofers, Damp and Waterproof Workers' Association.
- Journeymen Stone Cutters' Association of North America.
- International Brotherhood of Teamsters, Chauffeurs, Stablemen and Helpers.

The Bricklayers, Masons and Plasterers' International Union of America and the United Brotherhood of Carpenters and Joiners of America are not affiliated with the building trades department.

The International Brotherhood of Electrical Workers refused to become a signatory to the Board of Trade Claims agreement and withdrew from the building trades department.

# WORKERS' EDUCATION AND TRAINING

## Recommendations on Vocational Guidance Adopted by White House Conference

VOCATIONAL guidance as conducted in a few fortunate communities should be extended to boys and girls in all parts of the country, according to the Committee on Vocational Guidance and Child Labor, of the White House Conference on Child Health and Protection, 1930. Such guidance, the committee holds, is the only way to reduce the human and financial losses resulting from failure to aid pupils to make educational adjustments which will prepare them properly for vocations harmonizing with their interests and abilities.

The committee bases that part of its report dealing with vocational guidance on the eight principles listed below:<sup>1</sup>

1. Organization of the school system for guidance, placement and employment supervision.
2. An adequate study of the individual from the developmental standpoint.
3. Specially trained vocational counselors.
4. The awarding of scholarships.
5. Studies of occupational opportunities in the community, classes in occupational information and exploratory courses.
6. Modification of the curriculum to fit the needs of the individual.
7. Recognition of and cooperation with nonpublic organizations and special attention to specialized groups, such as Negroes, Indians, etc.
8. Provision for research in all phases of the work.

In view of these principles the committee made the following recommendations which were adopted by the conference:<sup>2</sup>

1. A vocational and educational guidance program should be established in every community, conducted by a special department, headed by a director who is immediately responsible to the superintendent of schools.
2. As in the case of all other important educational effort, it is useless to attempt to achieve results with an untrained staff; therefore, all persons engaged in counseling, teaching classes in occupational information, administering scholarships, placing children, and preparing occupational studies should be specially prepared for the discharge of their duties.
3. In connection with a study of the individual for purposes of guidance, knowledge is necessary of both his past and present accomplishments and experience—scholastic, social, intellectual, and personal. To this end cumulative reports, which provide a running record of his progress through school and beyond, should be established in every school system. Psychological tests both as a measure of educational achievement and mental capacity provide one of the most valuable instruments for educational and vocational guidance but such tests constitute only one factor in the study of the individual. There is need for some objective measurement of personality traits. The administration of a testing program should be under the direction of a trained psychologist and the giving of tests by untrained persons, without this supervision, should be discouraged.
4. Provision should be made for counselors in all schools where educational choices and the giving of vocational information are important.
5. Provision should be made in every community for the giving of scholarships to children who through necessity would otherwise have to leave school to go to work as soon as the child labor law permitted.

<sup>1</sup> United States Daily, Washington, Nov. 28, 1930. Supplement, Sec. II, p. 38.

<sup>2</sup> American Federationist, Washington, May, 1931, pp. 640-41: "Vocational Guidance," by Anne S. Davis



6. Study of general and local occupations, vocational opportunities and problems of the occupational world should be carried on in organized classes, taught by vocational counselors or specially trained teachers. Occupational pamphlets should be prepared giving information to young people regarding the duties, conditions of work, and preparation necessary for the occupations they may eventually enter.

7. Opportunities for all forms of training, vocational and academic, and educational experience, such as try-out courses, should be provided in increasing numbers. Any form of vocational education should be flexible and should take into account the rapid changes in production and be adapted to the varying needs of individual boys and girls.

8. More adequate facilities should be provided for separate junior placement offices under the public schools or other public agencies, where the interests and welfare of the children stand before all other considerations.

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### Application of Industrial Psychology to the Blind

THE National (British) Institute of Industrial Psychology is studying the problem of helping the blind to become effective members of the community.<sup>1</sup> The first step in the investigation was to ascertain in what occupations, other than those found in the existing workshops for the blind, these handicapped persons could most usefully be employed. The principal training institutions and workshops for the blind in and near London were visited and the occupations being carried on were studied in some detail. Later on, several workshops in the Provinces were surveyed. In general, these shops were primarily producing machine-knitted goods, mats, baskets, brushes, and other articles that the blind have been making for so many years. Results of experiments with blind workers in other countries were also carefully examined. The available data, however, for the most part were not definite on such important matters as earnings, efficiency, etc. Factories employing workers who were not blind were then visited with a view to studying occupations which might be filled satisfactorily by sightless persons. A list was made of such occupations.

*The blind in telephone manufacture.*—A definite offer of work for the blind for a brief period, on a subcontracting basis, was received from the manager of a factory manufacturing telephones. An experiment was made for nearly three months in employing such workers on a repetitive process, which consisted in fastening together a number of wires in a "form," so that when the form is inserted in a certain part of the telephone, connections can immediately be made. The wires, which are of different lengths and colors, must be passed through holes in a special way and are then wound together with waxed thread.

As already shown by psychological analysis, skill in the execution of movement depends not only upon muscular control but upon visual control. In writing, for instance, the movements are almost automatic but the alignment is controlled by vision which prevents the degeneration of the letter forms. Handwriting grows worse as a result of blindness even when raised lines are used. Consequently, it would seem that blind persons can acquire real skill only in work

<sup>1</sup> The Journal of the National Institute of Industrial Psychology (London), April, 1931, pp. 334-343: "Industrial Psychology Applied to the Blind," by C. B. Fox.

which is "truly independent of vision in the sense that effective substitutes for visual control can be developed."

The experiment on "forming" in the telephone factory fully confirmed this conclusion. The most proficient workers were found to be those who still had enough vision to distinguish colors and forms. How much they used their eyes could not be determined, but their superior output could hardly have been due to chance. It was quite obvious that a totally blind person took more time to do the same work than one who had some little sight, as the former had to grope more for his material. Although groping may be considerably reduced by special layouts and apparatus, it can not be eliminated altogether and therefore the productivity of the blind is adversely affected.

*Manual dexterity tests for the blind.*—Four tests were devised in order to estimate manual dexterity: (1) The placing of pegs in holes in a board; (2) a similar placing of pegs, the thumb and fingers of the preferred hand being used independently in turn; (3) the threading of nuts on small bolts (both hands); and (4) screw twisting in which movements of the wrist are dominant.

The results of these tests, which were given in private to the blind workers individually under the same experimental conditions, are as follows:

(a) *Influence of age.*—In straightforward pegging and in the assembly of nuts and bolts there was a progressive reduction in speed from the age of about 20. In the screw-twisting test, however, with the exception of the older totally blind, there were no marked differences in score between one age group and another.

(b) *Influence of vision.*—The difference between the partially and the totally blind was similarly very marked in the peg-board and nuts and bolts tests, but not in the screw-twisting test.

(c) *Influence of trade (for both partially and totally blind).*—In two of the tests the boot-repairing group showed a marked superiority to the other trade groups, while the poor performance of the mat and brush makers in all the tests was outstanding.

*Wage study.*—In nearly all cases, records of wages for two years or more were available. This made it possible to compare the average weekly earnings for the quarter reviewed with the earnings in the corresponding quarter a year or two years preceding. No attempt was made to compare wages in different workshops, as conditions and methods of payment were so varied. Within each workshop, however, the investigators found it possible to compare the earning capacity of different classes of blind persons.

In order to make comparisons the blind men were divided into two classes, the totally blind and the partially blind; the former class includes those who can only see enough to distinguish light and dark (with or without the ability to name the primary colors) and who can not recognize objects with certainty even when they are large. The partially blind class is made up of the remaining blind persons whose vision is less than 6/60 of normal.

The findings based on the wage data are:

The figures suggest that in almost all the workshops the maximum earning capacity tends to fall for the larger groups, within the years 30 to 40. This seems to hold for men and women, and for partially and totally blind alike, but the effect may be obscured by differences in experience within each age group. Since the age at which the person becomes blind varies greatly, the average experience of the age groups given does not always increase proportionately. On the whole, the variations in earnings are small.

A rearrangement of the data according to length of experience does not help greatly, since there are too few cases to allow of subdivision into groups equal in both age and experience. There is, however, a general tendency for earning capacity to increase during a period of 10 or 11 years and thereafter to decrease.

Much larger differences are seen, however, when the earnings of the partially blind and the totally blind are compared. The relative efficiency of these groups as shown by the wage records is substantially in favor of the partially blind. Although the effects of age and experience are not wholly excluded, the general trend of the differences in earnings is unmistakable. A composite figure for the average earnings of the partially blind, as compared with those of the totally blind, would be misleading unless the average experience of each group were substantially the same and the numbers approximately equal.

*Blind workers' isolation.*—The blind are unconscious of many happenings around them and of what other workers are doing unless their neighbors inform them. This relative isolation of sightless persons is an outstanding peculiarity and causes delays resulting from loss of rhythm or slowing down of the work rate.

The limited environment and lack of external stimuli tend to make many of the blind very self-centered and to fix their attention on their own difficulties. This brooding is frequently the cause of the many perplexities which arise in dealing with sightless people. Solitary rumination has a tendency to reduce the vitality of these handicapped workers and after a time lessens their output.

Most encouraging results in breaking down the isolation of sightless workers were obtained in the institute's experiment in teamwork in the basket department of a blind institution. Each member of the team was considerably interested not only in the carrying on of the experiment as a whole but also in each man's work.

After the first two days the team were left from time to time to carry on without supervision. Each man soon took a share in the extra work involved in keeping the materials and baskets in circulation, but the efficiency of the team was hardly impaired thereby. There seems to be little doubt that part of the success of this experiment was due to the overcoming of the isolated introspective state of the blind. If more ways of overcoming this relative isolation could be introduced into the methods of blind workshops, a greater cooperation and a more healthy spirit would prevail not only amongst the blind themselves, but also in their relations with their sighted colleagues.

*Subdivision of work.*—It is the custom in the basket departments of workshops for the blind for each worker to make a complete basket. The institute, however, undertook an experiment in which four volunteers manufactured the basket, one making the bottom, another doing the staking and "upsetting," another the siding, and a fourth the border and the foot. The institute's investigator prepared the material for the baskets and passed the completed parts from one volunteer to another, as the basket makers were not working side by side.

After due allowance was made for preparing the material and for any aid in finishing, the output under the new scheme was found to be 25.2 per cent in excess of that under the old plan, with a considerably more regular flow of production.

*Teamwork versus craftsmanship.*—The suggestion has been made that teamwork may have a tendency to lessen the sense of craftsmanship among blind basket makers. Each trainee, however, must learn the methods for making finished samples of each kind of basket before he is regarded as proficient. As a rule, workshops have found it both convenient and profitable to have a man specialize on several



kinds of baskets. The number of orders in which the above-described system of subdivision of work could be successfully operated would not be large enough seriously to impair the sense of craftsmanship or to interfere substantially with the worker's ability to make several kinds of baskets satisfactorily.

*Teamwork of blind girls.*—The efficiency of blind girls compared with average factory workers employed by Cadbury Bros. (Ltd.) was reported upon by Miss Cadbury, who stated that the output of

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workers supervised varies greatly in different institutions. Substantial variations were also found in the earnings of different blind workers. In order to ascertain whether these two types of variations were definitely correlated with each other the institute sent a questionnaire to each of the blind institutions in England. At the time the article under review was being prepared the replies to the inquiry were being examined to determine the effects of supervision upon blind workers after they have become experts in their trade.

*Layout of raw material.*—Unless particular attention is given to layout, blind workers inevitably waste time groping for implements or materials. The institute has designed a rack for one basket-making department which holds the cane from which the baskets

are made. This arrangement so facilitated the finding and withdrawal of the material that the output increased 10 per cent.

After a detailed study of the layout and operation of a knitting factory, methods were devised by the institute to cut down waste in time and material. A planning system was inaugurated to enable the establishment to supply goods on the dates promised, and a rearrangement was made which extended the available storage accommodation. By decreasing waste, etc., savings of more than \$1,000 (\$4,867) a year were effected. Furthermore there was an

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*Teamwork of blind girls.*—The efficiency of blind girls compared with average factory workers employed by Cadbury Bros. (Ltd.) was reported upon by Miss Cadbury, who stated that the output of a team made up of two workers with normal sight and five blind girls is 84 per cent of teams in which all the members have normal sight. The increase in cost is about 2 per cent (girls' wages only). When the team has three members with normal sight and four blind girls the production is ordinarily 91 per cent of teams with normal sight. The cost of the mixed team in this case is about 1 per cent more (girls' wages only). "The blind girls earn the same amount as the sighted teams," Miss Cadbury reports. "This is due to the fact that they work only on the lighter and better-paid packings. They also receive more assistance from the men."

Cadbury Bros. also pay slightly more to the girls with normal sight on the mixed teams, as they are obliged to do more to maintain the team's output. In other words, the responsibility for the maintenance of the team's efficiency is on the shoulders of the members who have sight. In observing the team at work the institute's investigators saw plainly that the regular flow of packed cartons was dependent largely upon the watchfulness of the two workers with sight who led the team. An additional prepared carton placed at the proper time, a set of labeled tins removed when necessary or one more package tied up later on, of course, made a big difference not only in regulating the run of the work but in eliminating any consciousness of strain which might result from the blind employee's realization that she was not up to the mark.

This type of aid being essential when the girls are able to see a little, the amount of assistance required when the workers are totally blind may be readily imagined. In fact, the work being done by the blind at Cadbury Bros. is simple and seemingly well within the capacity of persons who are totally blind. Speed of movement, however, is the vital issue, and there is reason to doubt whether the average totally blind person could ever work with the quickness required.

*Proportion of blind workers to supervisor with sight.*—The number of the supervisory staff with sight as compared with the number of blind workers supervised varies greatly in different institutions. Substantial variations were also found in the earnings of different blind workers. In order to ascertain whether these two types of variations were definitely correlated with each other the institute sent a questionnaire to each of the blind institutions in England. At the time the article under review was being prepared the replies to the inquiry were being examined to determine the effects of supervision upon blind workers after they have become experts in their trade.

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*Future study.*—The institute's work for the blind can be greatly enlarged and intensified by—

1. The vocational selection of the blind for training for specific industries;
2. Research into the methods adopted for training blind pupils in various industries;
3. Detailed studies of the trades followed by the blind to eliminate waste of time, labor, and material, etc.; and
4. Training the blind and organizing their employment in factories with the assistance of sighted labor so that they shall attain their maximum efficiency. For this purpose methods must be introduced to secure the cooperation of the employers and the management in these "sighted" factories.

The more highly educated blind present a rather different group of problems. Professions and careers must be found for these people, and a study should be made of the educational limitations resulting from their blindness. The best vocational education methods in view of such limitations are yet to be ascertained. Moreover, placement methods after vocational education should also be made the subject of investigation.

# COOPERATION

## Cooperative Provision of Medical and Health Service<sup>1</sup>

**I**N VIEW of the high cost of illness in this country it would seem that the provision of medical care offers a real opportunity for cooperative effort. As yet, however, cooperators in the United States seem to have taken very little advantage of this opportunity, though there are a few scattered instances in which medical or preventive work is done.

The Franklin Cooperative Creamery Association of Minneapolis, Minn., during 1925 and 1926 operated a clinic for the children of its members, but this was later discontinued.

The Cooperative Temperance Café, Chicago, Ill., pays sick benefits of \$1 a day to any employee who is sick for more than a week.

Sick-benefit societies do, of course, partake of the cooperative character, but can not be said to be part of the cooperative movement. Perhaps the organization of this type which is most nearly cooperative in character is the Workmen's Circle, which carries on many social activities on a cooperative basis. Among these are sick benefits, operation of a tuberculosis sanitarium, and death benefits.

The New York City branch of the organization pays sick benefits of \$6 a week for a maximum of 15 weeks per year. Data supplied to the Bureau of Labor Statistics by the organization show that the sick benefit department has a membership of 57,691 persons, of whom 9,745 received benefits during the year 1930, in the amount of \$357,833—or an average of about six weeks' benefits per member. For these benefits each member pays a fee of \$5.80 per year; the amount collected in fees in 1930 was \$334,518.

There are 17,382 persons enrolled in membership with the medical section, each of whom pays \$4.80 per year, which entitles both himself and family to service at the doctor's office and at his own home. The medical section also makes arrangements for consultations and for operations by specialists at nominal fees. There is no restriction as to the amount of care which shall be rendered to any one family during the course of a year. There are 43 physicians in the New York district who work for the circle on a part-time basis, besides 24 specialists. The circle also operates its own health center, in the nature of a clinic, at which nominal fees are charged.

<sup>1</sup> The data on which this article is based are from U. S. Department of Agriculture, *Agricultural Cooperation*, Nov. 13, 1929; U. S. Bureau of Foreign and Domestic Commerce, Special report No. 13, 1919 (unpublished) and Bul. No. 101; Consular reports of Sept. 20, 1927 (Switzerland), and Sept. 8, 1928 (Norway); *Cooperation* (New York), issues of May and August, 1921, February, 1922, January, 1924, February, March, and June, 1925, and March, 1930; International Labor Office, *Cooperative Information*, Nos. 50, 60, 91, 98, 108, 115, and 117; *Review of International Cooperation* (London), issues of May, 1929, August, 1929; *International Cooperative Bulletin*, July, 1923; *Cooperation at Home and Abroad*, by C. R. Fay; *Cooperative Democracy*, by J. P. Warbasse; *The Labor Movement in Post-War France*, by David J. Saposs; *La Coopération Belge*, Oct. 15, 1929; *People's Yearbook*, 1931; *Cooperative Productive Review* (Leicester, England), May, 1930; *The Producer* (Manchester, England), May, 1931; *Information Bulletin of Centrosyous* (Moscow), April, 1929; *Verband Schweizerischer Konsumvereine* (V. S. K.), *Rapports et comptes sur l'activité des organes de l'union en 1929*; *La Coopération* (suisse), Nov. 14, 1929, and May 28, 1931; and data supplied to the U. S. Bureau of Labor Statistics by individual societies and organizations.

Medicines are not furnished, but members may obtain these at reduced rates at drug stores with which the organization has arrangements.

In connection with the medical service the organization maintains a tuberculosis sanitarium at Liberty, N. Y., which can accommodate 50 patients; this sanitarium has a fully equipped hospital as well as an ambulatorium. Members are entitled to sanitarium treatment for nine months, at no extra charge. If the sanitarium is full, the member receives \$600 as benefits in lieu of treatment.

The member may also take out life insurance ranging from \$100 to \$3,000; the fee for this varies according to the age of the insured.

In some instances labor organizations have, either by themselves or jointly with other trade-unions, taken steps to provide medical care, without profit, to their members.

Originally established as a division of the joint board of sanitary control in the ladies' garment industry of New York City in 1914, the Union Health Center became a separate organization sponsored by nine locals of the International Ladies' Garment Workers' Union early in 1919. Shortly after the end of the disastrous left-wing strike of 1926, membership in the Health Center was opened to any labor union in the city. Each affiliating union pays a fee which varies according to its membership. Payment of this fee entitles its members to medical care at nominal rates. The center not only gives general medical care but has special clinics. It also operates a drug department where prescriptions are filled at nominal rates. The whole system is operated on a nonprofit basis.

Since 1926 the Cincinnati locals of the Amalgamated Clothing Workers have had a contract with a local health agency entitling members to medical examination and treatment of minor ailments. The preventive value of such examination has been stressed throughout. A dental service has also been installed. Another service is that of visiting nurses.

The Chicago locals of the same union have a dental clinic in their headquarters building.

A nonprofit health organization was formed in Los Angeles in 1929 to provide medical care for trade-unionists. This organization, the Union Labor Benefit League, for a fee of \$1.50 per month, undertakes to provide medical examination, prescriptions, medical care, and surgical operations, for each member and the wholly dependent members of his family. A report to the Bureau of Labor Statistics from the secretary of the league states that the organization in 1930 had more than 10,000 members. It is estimated by the league that the treatments given during the first half of 1930 would, at the regular minimum medical rates, have cost nearly \$75,000 more than the amount paid in by the members in dues.

#### Cooperative Provision of Medical Service Abroad

MANY European countries have elaborate systems of health insurance which provide medical treatment and sick benefits, especially for the working class. In such cases, of course, members of cooperative societies are also entitled to benefits under the system and any medical care provided by the society is in addition to the public bene-



fits. In some cases, however, the medical care supplied by the health insurance scheme applies only to the worker and not to his wife and children. Therefore, notwithstanding the prevalence of health insurance, many instances of the provision of medical care, sick benefits, and work for the preservation of health and prevention of illness are found in the cooperative movements of the European countries. Some of these are discussed briefly below.

#### Belgium

The Belgian cooperative societies are noted for their interest in the social life and well-being of the members. In some places the society is the center of the social life of the community. It is characteristic of the Belgian societies, especially the Socialist societies, that they return no dividends on purchases; the funds are used in ways which promote the welfare of the membership as a whole—as for sick benefits, maternity benefits, old-age and invalidity pensions for members and employees, for medical and nursing care, for social and recreational purposes, etc. Some of the societies operate children's vacation homes whose purpose is the preservation of the health of the members' children. Others also provide free medical service for the members.

The Belgian Cooperative Union reported that in 1929 it paid sickness and disability benefits, amounting to 1,436,288 francs (\$39,929), to 418,012 persons; 1,194 death benefits, amounting to 147,045 francs (\$4,088), and pensions amounting to 1,452,361 francs (\$40,376).

The cooperative society in Ghent maintains a clinic and health department, and in Brussels the cooperators have a medical clinic with up-to-date equipment and more than a score of doctors who work on a salary. The clinic in 1925 had 90,000 members, of whom on an average some 2,000 were treated each week. The rates are very low and entitle the member not only to treatment, but to sick benefits.

There are also, in the same city, a number of cooperative drug stores. The first such society in Belgium was formed in Brussels in 1882. Several more, all connected with the workers' friendly societies, were formed some years later. From Brabant the movement spread into Flanders and into the Liege district. Not only were independent pharmacy societies formed, but some of the consumers' cooperative societies started their own cooperative drug stores. Victor Serwy estimated that there were in 1929 about 100 of these cooperative drug stores throughout Belgium and that the business done by them amounted to some 12,000,000 francs (\$333,600) annually.

Fay remarks that these societies "have done a great work for Belgian working people," and states that they have reduced the price of medicines by "at least 50 per cent."

#### Canada

In the autumn of 1924 the farmers of the Edgerton District (Alberta) formed a "medical club" to furnish medical service to the members. Each member paid a fee of \$1.25 per month, for which he received medical service for himself and all the members of his family under the age of 21. The service was to include not only general medical treatment but minor operations. For obstetrical service and major operations an additional fee was charged.

The club never grew very large; it never had more than 30 members. It was in operation until about Christmas time, 1929, when it disbanded.

## Finland

The Finnish Cooperative Wholesale Society, S. O. K., has insured its regular employees against sickness, accident, and old age. Funeral benefits are also provided. As part of its general welfare work the society runs a vacation home for its staff as well as similar homes for the children of the members.

## France

One of the developments by the consumers' cooperative societies of France has been the organization of vacations in the country and the maintenance of children's colonies for health and welfare purposes. The consumers' society of the Somme district maintains a seaside colony which cared for 1,000 children in 1927 and some 2,000 in 1929; each child stays two weeks and all expenses are free, including transportation both ways. Some of the societies make arrangements for the children of members to spend a free vacation at the homes of cooperators in country districts. There is also the Aerieum of L'Enfance Coopérative which is open all the year round and the "Happy Home" on the Island of Oleron. The cooperative society of Lersin maintains a vacation home for children from 7 to 13 years of age.

The Cooperative Union of Paris operates for its members a medical, surgical, and dental clinic; it also pays sick, maternity, and death benefits in proportion to purchases. Five vacation colonies are owned and run by the union, which are open to members at low rates.

## Germany

The Hamburg Cooperative Society in 1918 erected a convalescent home for the children of its members, at a cost of 1,000,000 marks. This home accommodates free of charge some 1,000 children annually—100 at a time—for a period of four weeks each. Similar convalescent colonies have been opened by the Berlin Consumers' Cooperative Society and the Consumers' Cooperative Society of Munchen-Sendling.

The German Cooperative Wholesale Society, on the anniversary of the twenty-fifth year of service of its director-emeritus in 1929, acquired a property (formerly used as a hotel) for use as a rest and convalescent home for cooperators. The home can accommodate 110 persons at a time. A charge of 3 to 4 reichsmarks (71 to 95 cents) per day is made.

## Great Britain

The English Cooperative Wholesale Society maintains a health insurance section "established to administer for cooperators and others the benefits of the [health insurance] acts." In 1930 this section had 280,000 members and had paid £3,103,000 (\$15,100,750) in benefits. The valuation of the society by the Government actuary showed a surplus amounting to £742,000 (\$3,610,943), which the society has used to provide additional benefits. Thus it has provided dental care, making no charge for fillings and extractions, but charging 15 per cent of the cost of artificial teeth; convalescent home

treatment; hospital care, up to a cost of 3s. (73 cents) a day; and medical and surgical appliances, up to a cost of £2 (\$9.73) and half of their cost beyond that sum, subject to a total cost of £10 (\$48.67), optical examination and provision of eyeglasses at reduced rates; and grants to needy members. The ordinary cash benefits of the national health insurance scheme have been increased out of the society's funds as follows: Sick benefits, from 15s. to 20s. (\$3.65 to \$4.87) per week for men and from 12s. to 15s. (\$2.92 to \$3.65) for women; disability benefits, from 7s. 6d. to 10s. (\$1.83 to \$2.43) for men and from 7s. 6d. to 9s. (\$1.83 to \$2.19) for women.

The Ipswich Cooperative Society celebrated its seventy-fifth anniversary in 1928 by presenting to the city a 2-story building, with equipment, to be used as a medical dispensary for the benefit of sick persons unable to afford necessary surgical and medical supplies. This organization, it is reported, cared for more than 800 cases in 1928 and some 1,000 persons in 1929.

In some cases when the consumers' cooperative movement has acquired estates and farms, for agricultural purposes, the dwellings have been used for sanitariums. The Scottish cooperative women's guilds have been active in behalf of convalescents and the English guilds have a convalescent fund of their own.

The Nottingham society, which had a contract with local opticians to examine the eyes of its members, early in 1930 decided to discontinue this arrangement and hire its own optician and chemist on a salary basis. The Coventry society operates, for the benefit of its 36,600 members, four drug stores.

#### Hungary

In Hungary the Cooperative Union and Wholesale, Hangya, and the Central Cooperative Credit Institute have established a 60-bed hospital for cooperative employees. The children of employees are received free. The action of the wholesale society in arranging for vacations at summer resorts, either for nothing or at reduced rates, may also be regarded as a health measure.

#### India

It was reported, in 1924, that cooperative societies were being formed in Bengal for the purpose of fighting malaria. Each member paid a monthly fee. The sums so raised were used to hire workers to treat stagnant water with kerosene, to clear the jungles, and to fill up the pools in the rainy season. Some of the societies also hired physicians and maintained dispensaries.

A central society which had been formed in 1919 purchased the drugs and other supplies for the local societies.

#### Italy

Some of the Italian consumers' cooperative societies have organized sanitary services, maintain seaside and mountain colonies to which the children of members are sent for health and recreation, and operate hospitals for the poor. The Trieste society pays the expenses of 15 children at a time, for six months, at its tuberculosis preventorium. At one time it sent 140 children to a seaside resort



for a month. It was reported in 1929 that the society was planning to establish a mountain colony. The Cooperative Alliance of Turin maintains two children's colonies, one at the seaside and one in the mountains, which have taken in more than 6,000 children. A seaside and a mountain colony are also maintained by the Milan Cooperative Union for the children of its members.

There are also in Italy a number of cooperative pharmacy societies. The first of these was started in 1890 by the General Association of Salaried Employees of Milan, for the purpose of the cooperative purchase of pharmaceutical supplies and sanitary appliances. The society grew rapidly and in a few months had a membership of 694 members. It is still in existence and now owns 13 of the largest drug stores in the city, a pharmaceutical laboratory, and an analytical laboratory. It manufactures many of the products it sells and is the owner of a number of patents. It now has 2,600 members. It is stated that the society has considerable effect on the level of the local prices of drugs. One of the aims of the society is the instruction of its members in the principles of health and sanitation. Since 1908 it has, "with the collaboration of eminent medical men of international standing, published a theoretical and practical guide for doctors"; it also edits a regular series of practical medical publications and a monthly bulletin on the health of children.

The cooperative pharmaceutical societies of Italy are of three kinds: Those operating drug stores for members and the public, those run by and for a single occupational group, and those run as a special branch of another distributive organization. Of the last-named type are the seven drug stores of the Turin Cooperative Alliance, which do an annual business of some 7,500,000 lire (\$394,500), the People's Chemist Shop of Como, run by the Federation of Cooperative Societies of Como, the drug store belonging to the cooperative dairy society of Soresina, and the pharmaceutical establishment run by the society, "Cooperative Family," of Avio.

#### Netherlands

Many of the cooperative societies of the Netherlands have a separate fund used to provide welfare benefits for the members in such forms as sick benefits, death benefits, maternity benefits, etc.

A very good example of the services which can be rendered to members, in the way of medical and health service, by a cooperative society is the Volharding Society of The Hague. This society was founded as a consumers' cooperative society but started a medical section and insurance section as part of its work. In 1922 it had 48,000 persons in membership in this department. Now its regular membership numbers 15,664, but there are some 50,000 persons who are members of the medical and insurance department. (The medical department serves the members of two other cooperative societies in the city.)

The society operates an up-to-date clinic, with a 30-bed infirmary, operating rooms, and a lying-in room. It employs 26 physicians and 6 dentists, all of whom are full-time employees except the 8 who are specialists. Members receive free medical service, having their choice among the society's physicians.

At death the society pays a benefit varying with the length of membership in the society.

On January 17, 1930, the Netherlands sickness insurance law for wage earners went into effect, and while the law permitted the continuance of approved sick benefit societies, it is not known what effect the new system has had upon medical service of the Volharding Society.

#### Norway

The Economist Consumers' Association of Stavanger, Norway, sets aside each year one-third of the net trading gain. This money is put into a fund, called the "assistance fund," and is used to assist members in times of sickness, unemployment, and other emergencies.

#### Soviet Union

The consumers' cooperative movement in Russia is devoting an increasing amount of attention to assisting women and children in health matters and to instructing mothers in child care. The movement has set up a fund for the purpose, the money being raised by deduction from the net profit and a certain percentage of the sales. The fund is used to establish nurseries, kindergartens, and playgrounds and to provide medical advice to mothers and children. The fund has been in existence for some years.

In 1928, on the tenth anniversary of the first congress of peasant and working women, the Central Cooperative Union, Centrosoyus, established a traveling health consultation agency. This organization consists of a physician, a trained nurse, a technical assistant, and a cooperative instructor. The little group moves from village to village, stopping for about three months in each. At each place the children and their mothers are given a medical examination, and the physician gives illustrated lectures on the hygiene and care of the children. Each mother is given written instructions as to what measures she is to take. While this is going on, the cooperative instructor is giving talks on the cooperative movement and its advantages. Before leaving the village the health center starts a permanent organization to continue its work.

The union also maintains for the benefit of its employees a 40-bed hospital, with a staff of specialists and assistants; an analytical laboratory; an X-ray laboratory; ambulance stations; a dental clinic; a rest house in the suburbs of Moscow; and a sanitarium in the Crimea. When an employee is seriously ill, the society's physicians visit him at his home.

#### Spain

The cooperative society, La Mutualidad Obrera, in Madrid, has since 1904 maintained a health service as one of its departments. The society operates several clinics in different parts of the city, each having a number of beds, an operating room, dental clinic, and a staff of physicians and nurses. The drug store connected with each clinic furnishes free medicine to the members.

For the service the members pay 4½ pesetas a month.

The service rendered includes medical attention, major and other operations, medical advice, and burial. The only extra cost is for gold teeth.

The mutual-aid sections of the fishermen's cooperative societies (*pósitos*) pay sick and death benefits and provide medical care and medical attendance. During the 5-year period, 1924 to 1929, such benefits and service amounted to a value of more than \$150,000.

#### Switzerland

For the benefit of its employees the Swiss Cooperative Union maintains an insurance department from which it pays invalidity and old-age benefits, as well as pensions to the dependents of deceased employees.

The union has for some years maintained a holiday home for its employees. In 1929 a second summer "vacation colony," for members, was opened at Weggis. During the 28 weeks during which the vacation home was open, 1,270 adults and 62 children spent some time there. The colony is owned by the union, but each society affiliated with the union has the right to nominate a certain number of its members for a week's sojourn at the colony. The entire cost of board and lodging is borne by the union, which also refunds to the visitors the amount spent for transportation to and from their homes. Persons not sent by member societies pay for board and lodging at a very low rate.

#### Yugoslavia

One of the phases of the cooperative movement in Yugoslavia is the cooperative hygiene societies, which provide medical treatment, drugs, medicines, etc., and carry on general educational work in hygiene. In 1926 there were in Yugoslavia 28 of these societies, having a combined membership of 8,281 persons; during that year 16,819 cases received treatment.

The need for the services of these societies is revealed by a report by a Yugoslav sociologist that in 1926, in that country 72 per cent of the dwellings were "damp, dark, or obstructed," 12 per cent had paper (instead of glass) windows or only wooden shutters, 30 per cent had no means of lighting their houses artificially, 38 per cent had no beds, 20 per cent no tables or chairs, and 8 per cent had no arrangements for heating. Ninety-five per cent of the inhabitants had no way of procuring pure drinking water, and 88 per cent had to go without medical attention when ill.

In 1929 the number of societies had risen to 48 and their membership to 15,372; the number of persons receiving treatment was 33,242.

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### Cooperative Labor Societies in Italy

IN FEW countries have workers' productive societies attained any great importance in the general cooperative movement. Italy is one of the countries, however, in which cooperative labor societies have attained real success. An article in the January, 1931, issue of the *Monthly Bulletin of Agricultural Economics and Sociology*, published by the International Institute of Agriculture (Rome), contains an account of the present status of these societies in Italy.



These societies are formed mainly among navvies<sup>1</sup> and laborers in the building trades, primarily to provide employment for the members and to attain working independence. These organizations take contracts for public works, such as the construction and maintenance of roads, bridges, and canals, and drainage, reclamation and irrigation of land, land improvement, etc. The maximum value of any one society is fixed by decree at 1,000,000 lire<sup>2</sup> (\$52,600), but several societies may combine into a union to carry out contracts up to a value of 5,000,000 lire (\$263,000).

The societies are required to register with the local authorities, and 5 per cent of every payment for work, as it becomes due, is withheld as a guaranty of the faithful performance of the contract. The societies are also subject to Government supervision.

At the end of the year 1929 there were in Italy 1,301 cooperative labor societies with a combined membership of 105,453. The greatest development has been attained in the Province of Emilia where there are 356 societies with 46,269 members. The Province of Venetia has 189 societies with 16,464 members, Tuscany 124 societies with 11,564 members, and Lombardy 102 societies with 5,713 members. In March, 1930, these local societies had formed 20 unions to carry out the larger contracts.

The work done by certain of the societies and their unions has been rather remarkable. Thus the union at Reggio Emilia has carried on annually, in the Province of Parma, land-improvement works valued at from 8,000,000 to 10,000,000 lire (\$420,800 to \$526,000) and has at times given employment to as many as 2,000 workmen. The union of the Province of Modena, formed in 1915 and including in membership 40 societies, in 1929 carried out contracts aggregating 13,402,000 lire (\$704,945), and is now employing several hundred workers on contracts amounting to about 20,000,000 lire (\$1,052,000).

The union at Grosseto, Tuscany, formed in 1921, has two sections, dealing, respectively, with labor and agriculture. The labor section undertakes the usual contracts for building construction and land work, while the agricultural section carries out land improvement and cultivation, employing such farm labor as can be supplied by its constituent societies. In 1926 the section leased an estate of some 900 hectares<sup>3</sup> (2,224 acres) which it is radically transforming. It has dug more than 6 miles of drainage ditches and canals, sunk wells, and built fences and shelters for the men, the livestock, and the machinery, and has now started cultivation.

Another society, the Milan Society, is reclaiming part of the lower basin of the Sele River, in the Province of Salerno. Originally a "marshy and malaria-stricken district," the place is being rendered healthful, and a village is being built and a wide canal constructed. More than 400 workers are being employed on the project. Eventually cultivation of the land will be undertaken.

The Labor Society of Ravenna Men, which has been in existence for 56 years, is noted for the reclamation work it has done in Ostia, Maccarese, Isola Sacra, and Camposalino in the Roman Campagna. The land so reclaimed totals some 70,000 hectares (172,970 acres).

Statistics compiled by the National Institute of Cooperation, quoted in the article under review, show that in 1927 these societies

<sup>1</sup> Laborers, usually engaged in work on canals, railroads, embankments, etc.

<sup>2</sup> Conversions into United States currency on basis of lira = 5.26 cents.

<sup>3</sup> Hectare = 2.471 acres.

carried on construction work to the value of 182,089,089 lire (\$9,577,886), reclamation work to the value of 45,459,436 lire (\$2,391,166), and road-maintenance work aggregating 11,311,449 lire (\$594,982).

### Compulsory Agricultural Cooperative Societies in Peru

THE Monthly Bulletin of Agricultural Economics and Sociology,<sup>1</sup> in its November, 1930, issue contains a summary of a law recently passed in Peru which makes compulsory the organization of farmers into agricultural societies. The object is, it is stated, "to make use of these legally recognized agricultural organizations for guiding the farming class toward higher voluntary forms of cooperative marketing, amalgamation of farm undertakings, and joint contract, the rise and development of all of which would otherwise, without this basis of legal recognition, be much delayed."

Each provincial governor is directed to call together the farmers of his Province for the purpose of organizing the societies, and when formed the societies will be "controlled and inspected" by the department of agriculture and stock farming.

No farmer will be able to "evade the obligation" of belonging to the society in his district, on pain of being barred from the (tax?) exemptions granted to agriculturists and from purchasing guano for his farming operations. Also, it is pointed out, "only members of these societies can in any way secure representation in the Government."

It is stated that these societies will be "at once political, economic, and legal in character." Their purposes include (1) the furthering of advanced methods of cultivation, irrigation, etc., (2) the organization of agricultural cooperation of all types and forms (including the marketing of crops, purchase of farm machinery and supplies, etc.), (3) the safeguarding of the members' rights and the supervision of the performance of their duties, and (4) the appointment of a legal representative to represent them in all dealings with the Government on questions relating to the industry.

The members will pay monthly contributions to the society.

### Women in the Soviet Cooperative Movement

THE total membership of the Russian consumers' cooperative movement on January 1, 1931, according to the April 10, 1931, issue of the Information Bulletin of Centrosoyus, reached 56,000,000 persons. Of the total number, woman members on September 1, 1930, formed 25.9 per cent, as compared with 14.39 per cent on October 1, 1928. As they have grown in numbers the woman cooperators have also been successful in gaining increasing representation on the boards of directors and auditing committees. In the towns, in 1929-30, women formed 31.1 per cent of the total membership of boards of directors and 26.4 per cent of the membership of the auditing committees; in the rural societies the proportion was 19.2 and 16.7 per cent, respectively.

<sup>1</sup> Part II of the International Review of Agriculture, Rome.

Much propaganda work is being carried on among the workers' wives and among the peasant women for the purpose of enlisting their active interest in the work of the cooperative societies. In one region the cooperative women have organized on a cooperative basis 128 crèches for the care of the children of the peasant women while they work in the fields. In another area the regional cooperative union has organized 8 medical clinics for women, 300 "children's institutions" (including playgrounds, gardens, etc.), and 125 dressmaking courses.



# INDUSTRIAL DISPUTES

## Strikes and Lockouts in the United States in May, 1931

DATA regarding industrial disputes in the United States for May, 1931, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, 1929, and 1930, number of workers involved and man-days lost for these years and for each of the months—January, 1929, to May, 1931, inclusive—as well as the number of disputes in effect at the end of each month and the number of workers involved. The economic loss (in man-days) involved is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1929, TO MAY, 1931, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, 1929, AND 1930

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total.....	734		349,434		37,799,394
1928: Total.....	629		357,145		31,556,947
1929: Total.....	903		230,463		9,975,213
1930: Total.....	653		158,114		2,730,368
<i>1929</i>					
January.....	48	33	14,783	39,569	951,914
February.....	54	35	22,858	40,306	926,679
March.....	77	37	14,031	40,516	1,074,468
April.....	117	53	32,989	52,445	1,429,437
May.....	115	73	13,668	64,853	1,727,694
June.....	73	57	19,989	58,152	1,627,565
July.....	80	53	36,152	15,589	1,062,428
August.....	78	43	25,616	6,714	358,148
September.....	98	49	20,233	8,132	244,864
October.....	69	31	16,315	6,135	272,018
November.....	61	32	10,443	6,067	204,457
December.....	33	21	3,386	2,343	95,541
<i>1930</i>					
January.....	45	21	9,240	5,316	184,730
February.....	52	40	37,480	6,683	438,570
March.....	49	38	15,017	5,957	291,127
April.....	64	41	6,379	5,840	189,828
May.....	66	29	9,329	4,386	185,448
June.....	59	34	14,011	8,311	144,117
July.....	78	30	14,308	4,815	141,647
August.....	51	33	15,902	7,131	142,738
September.....	72	44	16,337	13,778	208,184
October.....	47	33	10,858	16,007	335,916
November.....	44	29	4,390	7,759	273,608
December.....	26	7	4,863	5,144	194,455
<i>1931</i>					
January.....	56	20	10,147	2,927	181,031
February.....	52	34	19,984	12,512	228,329
March.....	45	27	26,121	28,139	422,545
April <sup>1</sup> .....	66	52	25,154	23,058	778,322
May <sup>1</sup> .....	83	71	28,180	21,325	445,384

<sup>1</sup> Preliminary figures subject to change.

## Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in March, April, and May, 1931, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN MARCH, APRIL, AND MAY, 1931

Industry	Number of disputes beginning in—			Numbers of workers involved in disputes beginning in—		
	March	April	May	March	April	May
Auto, carriage, and wagon workers		1			100	
Bakers		2	3		16	107
Barbers			1			1,200
Brick and tile workers		1			14	
Building trades	16	23	26	1,310	5,800	5,211
Chauffeurs, teamsters	1	3	1	6	1,406	150
Clothing	7	12	7	717	1,033	438
Food workers		1			54	
Furniture	1	1		70	35	
Glassworkers	1		1	75		65
Iron and steel			2			1,600
Laundry workers	1	1		12	500	
Leather	1	1	3	30	60	2,790
Longshoremen, freight handlers	1	1		50	400	
Lumber, timber, and millwork	1			125		
Metal trades		2	4		68	284
Miners	4	6	23	22,906	14,700	6,402
Motion-picture machine operators, actors, and theatrical workers	2			29		
Printing and publishing	1		1	11		12
Stationary engineers and firemen		1			12	
Stone		1			80	
Municipal workers			2			3,326
Textiles	7	8	6	746	776	6,026
Tobacco	1		1	34		9
Other occupations		1	2		100	500
Total	45	66	83	26,121	25,154	28,180

## Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in May, 1931, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN MAY, 1931, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in May, 1931, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Bakers	1	2			
Barbers					1
Building trades	3	13	8		2
Chauffeurs, teamsters			1		
Clothing	1	4	2		
Glass workers		1			
Iron and steel			1		1
Leather			2		1
Metal trades	1	1	2		
Miners	1	8	9	3	2
Printing and publishing	1				
Municipal workers		1			1
Textiles		3	1		2
Tobacco	1				
Other occupations		1		1	
Total	9	34	26	4	10

In Table 4 are shown the number of industrial disputes ending in May, 1931, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN MAY, 1931, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in May, 1931			
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months
Bakers.....	1			
Building trades.....	15	6	3	
Chauffeurs, teamsters.....			1	
Clothing.....	4	1	2	1
Furniture.....	1			
Iron and steel.....	2			
Laundry workers.....		1		
Leather.....	1		1	
Longshoremen, freight handlers.....	1			
Metal trades.....	1	2		
Miners.....	6	1	1	
Printing and publishing.....	1			1
Municipal workers.....	2			
Textiles.....	2	1	2	1
Other occupations.....	2			
Total.....	39	12	10	3

## Principal Strikes and Lockouts Beginning in May, 1931

*Silk workers, Pennsylvania.*—A strike of some 3,000 silk workers in Allentown beginning as of May 1 and affecting approximately 16 or more mills is still in progress. This was a protest strike, it is said, against wage reductions running up to 16½ per cent.

*Building-trades workers.*—A successful strike of 2,000 building-trades workers in Indianapolis, Ind., against a wage reduction of 20 per cent lasted from May 1 to May 14.

An unsuccessful strike of 1,100 building-trades workers in Youngstown, Ohio, including carpenters, electricians, and plumbers, against a wage reduction of \$1 per day, is reported to have begun on May 1 and to have ended on May 9.

*Steel workers, Ohio.*—Following two wage reductions during May amounting to 15 per cent, approximately 1,500 employees of the Empire Steel Corporation of Mansfield struck on May 12 and May 13. The strike ended on May 15 after the company agreed to restore the wage scale of April 30. Some minor differences were compromised and others deferred for later determination.

The company on May 28 went into receivership and the employees on June 6, without the knowledge of the company officials, voted in favor of a wage reduction of 5 per cent to be effective for 3 months.

*Rubber, leather, and textile workers, Indiana.*—Some 2,800 workers of both sexes, members of Rubber Workers' Union No. 18155 and employed by the Mishawaka Rubber & Woolen Manufacturing Co. of Mishawaka struck on May 18 because of alleged discrimination against members of local union; installation of efficiency system, task and bonus, reduction of wages. This strike is reported to have been settled on June 8 by the employees' voting to resume operations on the company's promise to discuss wage revision.

*Municipal employees, Chicago.*—A short strike of approximately 3,300 organized city employees, consisting of street cleaners, street repair men, truck drivers, etc., in the department of public works,



was in effect May 21, on which date announcement was made that preliminary negotiations had been successful, and that terms for a permanent settlement of the dispute would be sought at a conference to be held at the city hall on May 25. The strike, it is said, was started by the street sweepers' union as a protest against the mayor's economy program, and the other groups followed.

*Pocketbook workers, New York City.*—According to reports, some 2,500 pocketbook workers, members of the International Pocketbook Workers' Union, went on strike May 28, following the failure of negotiations with their employers, represented by the Industrial Council of the Leather Goods Manufacturers, for a new agreement on wages and working conditions to take the place of the one which expired on May 1. The main cause of the strike was the demand of the manufacturers for a 25 per cent reduction in wages, and other modifications, which were unacceptable to the workers, who wanted a 40-hour week and a system of unemployment insurance. The employers, it is said, refused arbitration. The action of the union in calling the strike followed an alleged lockout ordered by the Industrial Council on May 18, when work was refused to members of the union, so that the lockout-strike began, it is understood, on the date last mentioned.

A settlement of the strike was reached on June 10, when the workers voted to accept a new agreement with the manufacturers, which provides, it is said, for a  $7\frac{1}{2}$  to 15 per cent reduction in wages, unemployment insurance to be supported equally by the union and the employers, an increase in the number of apprentices in one branch of the trade and allows employers to discharge 10 per cent of their workers every six months.

#### Principal Strikes and Lockouts Continuing into May, 1931

*Hosiery workers, Philadelphia.*—The strike which began on February 16 still continues in part. Press reports of June 1 stated that, according to union officials, 21 of the open-shop mills had signed agreements with the union since the strike began, but that the strike was still effective in about a dozen plants and about 1,500 workers were still out.

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#### Conciliation Work of the Department of Labor in May, 1931

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

**T**HE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 76 labor disputes during May, 1931. These disputes affected a known total of 39,629 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On June 1, 1931, there were 51 strikes before the department for settlement and in addition 26 controversies which had not reached the strike stage. The total number of cases pending was 77.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF MAY, 1931

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Textile mills, Allentown, Pa.	Strike	Textile workers	Wages cut 16½ per cent.	Pending.	1931	1931	3,000	---
Plumbers, Cincinnati, Ohio.	do.	Plumbers	Renewal of agreement.	Adjusted. Agreement renewed for 2 years at \$1.40 per hour.	May 1	May 15	285	---
Federal building, Lewiston, Mont.	Controversy	Building trades	Violation of prevailing wage, and 8-hour law.	Adjusted. Prevailing wage will be paid; local labor where practicable.	do.	May 7	100	---
St. Louis Public Service Co., St. Louis, Mo.	Threatened strike.	Street - railway workers.	Proposed 10 per cent wage cut.	Adjusted. Agreed on arbitration.	Apr. 18	May 16	3,550	---
Electrical workers, St. Louis, Mo.	Controversy	Electrical workers	Small contractors objected to insurance.	Adjusted. All union contractors adopted new union contract.	Apr. 27	May 1	500	---
Building, Indianapolis, Ind.	Lockout	Building trades	Wages cut 20 per cent.	Adjusted. Returned; no wage cut.	May 1	May 14	2,000	1,000
Fellows Huber Silk Mills, East Stroudsburg, Pa.	Strike	Silk workers	Asked union recognition and re-adjustment of wage rates.	Pending.	May 6		110	---
M. Marsh & Sons, Wheeling, W. Va.	Controversy	Stogie makers	Asked interpretation of agreement.	do.	Apr. 28		1,500	---
Post-office building, Newburgh, N. Y.	do.	Building trades	Working conditions.	do.	Apr. 30		(1)	---
Firemen on Monongahela River, Braddock, Pa.	do.	Firemen	Wage cuts.	do.	May 1		(1)	---
Poston Springfield Brick Co., Springfield, Ill.	do.	Road pavers	Asked 75 cents per hour; receiving 30 to 40 cents.	Adjusted. Compromised on 60 cents per hour.	do.	May 15	26	400
Building, Youngstown, Ohio.	Strike	Building trades	Renewal of annual wage contract.	Adjusted. Carpenters accepted \$1 per day cut.	May 1	May 9	1,100	2,000
Greenpoint Metallic Bed Co., Brooklyn, N. Y.	do.	Coil assemblers	Readjustment of piecework rates.	Adjusted. Reemployed as individuals.	Apr. 30	May 4	35	315
Mason & Moore (Inc.), New York City.	do.	Printing-press machinists and helpers.	Wages cut 25 per cent; hours increased from 8 to 9.	Adjusted. Continued old scale—\$1.25 per hour and 40-hour week.	Apr. 20	Apr. 27	50	25
Minnesota-Atlantic Transit Co., Duluth, Minn.	do.	Longshoremen	Proposed cut from 70 to 60 cents per hour.	Adjusted. Accepted 5 cents per hour cut.	May 5	May 8	125	---
Great Lakes Transit Co., Superior, Wis.	do.	do.	Proposed 15 per cent wage cut.	Adjusted. All returned with small wage cut.	do.	May 15	125	---
Plumbers, Dayton, Ohio.	do.	Plumbers	Renewal of agreement; wages.	Adjusted. Agreement concluded; no change in wages; minor changes.	May 1	May 6	50	---
Soldiers' Home Building, Dayton, Ohio.	do.	Structural iron workers.	do.	Adjusted. Renewed last year's agreement.	May 15	May 28	50	---
United States Army Post, Fort Wayne, Mich.	Controversy	Bricklayers	Wages cut from \$1.50 to \$1.25 per hour.	Adjusted. Agreed to pay prevailing wage—\$1.30 per hour.	Mar. 2	May 8	25	2,300

1 Not reported.

## LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF MAY, 1931

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Deep Vein Coal Co., Princeton, Ind.	Strike	Miners	Wages and working conditions	Unclassified. Settled by international union.	1931 May 5	1931 May 7	350	---
Blum DeLuxe Cigar Co., New York City	do	Cigar workers	Asked discharge of foreman	Adjusted. Agreement concluded.	Mar. 15	May 1	34	13
Marmon-Hayes Automobile Co., Indianapolis, Ind.	Controversy	Water sanders	Protest against low wages and conditions.	Unclassified. Strike call not effective; continued without change.	May 2	May 8	25	100
Baker Friedman Co. (Inc.), Brooklyn, N. Y.	Strike	Shoe workers	Alleged discrimination	Pending	Apr. 27	May 20	126	48
Excelsior Marble & Tile Works (Inc.), New York City	do	Marble workers	Wages cut 15 per cent; asked 8-hour day and recognition of union.	Adjusted. Accepted 10 per cent cut and 48-hour week.	Apr. 20	Apr. 27	14	3
Sturtevant Co., Hyde Park, Mass.	do	Metal polishers	Proposed 10 per cent wage cut	Unclassified. Work sublet to another company.	May 4	May 8	24	---
Post-office building, Pittsburgh, Pa.	do	Carpenters	Violation of agreement	Pending	May 6	---	30	---
Booth & Flinn, contractors, Pittsburgh, Pa.	do	Pile drivers	do	do	do	---	30	---
South Fayette Coal Co., Uniontown, Pa.	do	Miners	Wages cut 15 per cent	Adjusted. Compromised on 7½ per cent cut.	May 2	May 8	200	4
Miners, Flushing, Ohio	do	do	10 miners discharged	Adjusted. All may return when practicable.	May 1	May 11	40	90
Scott's Run Field, W. Va.	do	do	Wages cut; asked union wages and recognition.	Adjusted. Union agreement signed by majority of those on strike.	May 11	May 29	5,020	---
Federal building, Toledo, Ohio	do	Bricklayers and carpenters.	Objection to laborers' pay	Adjusted. Laborers allowed 50 cents and mortar mixers 70 cents per hour.	May 9	May 11	60	3,000
Fort Wayne Printing Co., Fort Wayne, Ind.	do	Lithographers	Refused to accept 10 per cent wage cut.	Unable to adjust. Some places filled by new workers.	May 4	May 18	12	150
Plymouth Quarries (Inc.), East Weymouth, Mass.	do	Granite cutters and quarry workers.	Asked union recognition and prevailing wages.	Pending	May 1	---	53	---
Ludlow Valve Co., Troy, N. Y.	do	Molders and laborers.	Laborers cut from 66 to 50 cents per hour; struck; molders refused work with nonunion men.	Adjusted. Company agreed to pay 66 cents per hour; laborers returned.	May 10	May 16	143	60
Electricians, Salt Lake City, Utah	Controversy	Electricians	Proposed wage cut of \$1 per day	Adjusted. Withdrew proposal to cut; \$9 per day being paid.	May 5	May 14	40	---
Painters, Nassau and Queens Counties, N. Y.	Strike	Painters	Renewal of agreement	Adjusted. Returned without change; \$12 per day and 40-hour week.	Apr. 24	May 12	450	---
Sheet-metal workers, Indianapolis, Ind.	Controversy	Sheet-metal workers	Wage cut	Adjusted. Accepted 12½-cent cut; \$1.15 per hour.	Apr. 28	May 7	150	50



City	Industry	Organization	Issue	Resolution	Date	Amount
San Diego, Calif.	Gymnasium building	San Diego, Calif.	Asked prevailing wage, \$8 per day; receiving \$5 to \$7.	Pending	Mar. 1	15
San Diego, Calif.	Aircraft Shop, Naval Air Station	San Diego, Calif.	do	do	do	10
San Diego, Calif.	Post-office building	Santa Ana, Calif.	Building trades	do	Mar. 4	10
Chicago, Ill.	Elevator grain tanks	Chicago, Ill.	Labors on building	Adjusted. Contractor agreed to pay prevailing scale.	May 11	60
Pittsburgh, Pa.	Mohican Market Co.	Pittsburgh, Pa.	Bakers	Pending	May 18	4
Tenn.	Davison Mining Co.	Wilder, Tenn.	Miners	do	May 10	10
Tenn.	Fortress Coal & Coke Co.	Wilder, Tenn.	do	do	do	80
Tenn.	Brian Hill Collieries	Wilder, Tenn.	do	do	do	50
Philadelphia, Pa.	Gimbel Department Store	Philadelphia, Pa.	Elevator operators and starters	do	May 11	45
Wayne, N. J.	Columbia Broadcasting System	Wayne, N. J.	Plumbers	Adjusted. Returned (other terms not reported).	(1)	(1)
Woolen	Mishawaka Rubber & Woolen Mfg. Co.	Mishawaka, Ind.	Employees	Adjusted. System modified; reinstated those discharged for union membership.	June 8	2,800
New York City	Udelowitz & Handelman	New York City	Clothing workers	Pending	May 17	100
Chicago, Ill.	High-school building	Chicago, Ill.	Carpenters and laborers	Adjusted. Contractors agreed to pay prevailing wage.	May 11	20
Bicknell, Ind.	Knox Consolidated Coal Co.	Bicknell, Ind.	Miners	Unclassified. Returned without change before commissioner's arrival.	May 20	600
Newark, N. J.	Newark Evening News	Newark, N. J.	Drivers and carriers	Pending	do	150
New York City	H. Anton Bock & Co.	New York City	Cigar makers	Adjusted. Withdrew proposal to readjust rates.	May 18	60
New York City	Miljogor Cigar Factory	New York City	do	Pending	do	45
Miss.	Veterans' Hospital	Gulfport, Miss.	Cement finishers	Adjusted. Strike averted in conference.	May 20	15
Indianapolis, Ind.	Hospital for the Insane	Indianapolis, Ind.	Hod carriers and engineers	Adjusted. Union labor employed.	Apr. 15	50
Philadelphia, Pa.	Midway Theater	Philadelphia, Pa.	Trowel trades	Pending	May 22	5
U. S. Veterans' Hospital	McMullens-Leavens Shirt Co.	Glens Falls, N. Y.	Shirt cutters	Adjusted. Accepted 10 per cent cut and returned.	Apr. 20	18
U. S. Veterans' Hospital	U. S. Veterans' Hospital	Millington, N. J.	Structural-iron workers	Pending	May 22	120
New York City	Excel Dress Co.	New York City	Dress workers	Adjusted. Allowed 5 cents on \$6 and 10 cents on \$10 dresses.	May 19	20

<sup>1</sup> Not reported.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF MAY, 1931—Continued

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Irving C. Weiman (Inc.), New York City.	Strike.....	Dress workers.....	Asked recognition of Needles Trades Industrial Union; piece-work rates. Dispute between unions relative to charter. Not paying prevailing wage.....	Adjusted. Recognition not allowed; some increases on piece-work. Pending.....	do.....	May 25	90	3
City Power Bakery, Hazleton, Pa.	do.....	Bakers.....			May 27		7	
Veterans' Hospital, Tucson, Ariz.	Controversy.....	Carpenters.....		Adjusted. Prevailing wage to be paid—carpenters, \$8; laborers, \$3 per day. Adjusted. Allowed prevailing wage; local workers employed. Pending.....	May 22	June 4	24	50
Post-office building, Decatur, Ind.	do.....	Building.....	Wage cuts.....		May 24	June 2	(1)	
Hayes-Custer Stove Shop, Bloomington, Ill.	Strike.....	Stove workers.....	(1)		May 27		(1)	
Pocketbook makers, New York City.	do.....	Pocketbook makers.....	Wages cut 25 per cent; asked 40-hour week and unemployment insurance.	Adjusted. Accepted 7½ to 15 per cent wage cuts; company will help support unemployment insurance. Pending.....	May 28	June 10	2,500	
Saul Mutterpearl Factory, New Bedford, Mass.	do.....	do.....	Wage cut 10 cents per hour.....		May 29		150	
Universal Leather Co., Fall River, Mass.	do.....	do.....	Discrimination for union affiliation.	Adjusted. Allowed to organize.....	do.....	June 1	140	
Gropper Sport Clothes Co., New York City.	do.....	Knitters.....	Asked increase for piecework.....	Adjusted. Allowed \$2.75 increase per dozen on sports dresses. Pending.....	May 19	May 22	30	18
Central High Vocational School, Erie, Pa.	do.....	Carpenters.....	Sympathy with striking plumbers.		May 20		6	25
Oxford Theater, Philadelphia, Pa.	do.....	Stage hands.....	Wages and discharges.....	Unable to adjust. Others employed. Pending.....	May 28	June 5	4	11
Building, Shreveport, La.	Controversy.....	Building.....	Wages for bricklayers, plasterers, cement finishers cut from \$13 to \$9 per day. Proposed wage cut.....		May 29		(1)	
Acme-Evans job, Indianapolis, Ind.	do.....	do.....		Adjusted. Proposal withdrawn; continued without cut. do.....	Apr. 28	May 2	45	5
Building, Fort Harrison and Indianapolis, Ind.	do.....	do.....			do.....	do.....	50	10
Fairgrounds Pavilion, Indianapolis, Ind.	do.....	do.....			do.....	do.....	100	50
Veterans' Hospital, Indianapolis, Ind.	do.....	do.....			do.....	do.....	10	15
Total.....							25,875	12,754

1 Not reported.

# Industrial Disputes in Great Britain and Northern Ireland in 1930

THE Ministry of Labor Gazette for May, 1931, contains a review of the industrial disputes occurring in Great Britain and Northern Ireland in 1930, which shows that while the number of disputes occasioning stoppages was only slightly less than in 1929, there was a striking diminution in the number of workers involved and in the amount of time lost. The number of disputes beginning in 1930 which caused a stoppage of work was 422, and the number of workers directly concerned was 286,100, with 20,800 indirectly involved. In addition, about 1,800 workers were involved, directly or indirectly, in 8 disputes which began in 1929 and were still in progress at the beginning of 1930. Disputes involving fewer than 10 workers and those lasting less than one day are omitted from the statistics, it is explained, except when the aggregate duration of the dispute (i. e., the number of workers multiplied by the number of working days, allowing for workers replaced by others, etc.) exceeded 100 days. Comparative figures for the two years are shown, by industries, in the following table:

TABLE 1.—NUMBER OF INDUSTRIAL DISPUTES, WORKERS INVOLVED, AND DAYS LOST DURING 1929 AND 1930 IN GREAT BRITAIN AND NORTHERN IRELAND, BY INDUSTRY

Industry group	1929			1930		
	Number of disputes begun	Workers involved in all disputes	Duration (in working days) of all disputes	Number of disputes begun	Workers involved in all disputes	Duration (in working days) of all disputes
Coal mining.....	153	78,500	576,000	150	148,600	663,000
Other mining and quarrying.....	9	1,200	90,000	8	600	8,000
Brick, pottery, glass.....	12	500	6,000	7	600	5,000
Iron and steel.....	7	3,100	56,000	5	700	9,000
Engineering.....	18	19,900	62,000	11	800	8,000
Shipbuilding.....	25	8,000	529,000	23	4,200	15,000
Other metal.....	30	7,700	120,000	31	4,200	60,000
Cotton.....	35	392,200	6,642,000	17	2,600	36,000
Wool textile.....	14	6,800	106,000	7	122,200	3,279,000
Other textile.....	9	1,100	4,000	20	4,000	77,000
Clothing.....	17	1,600	11,000	21	1,400	10,000
Food, drink, and tobacco.....	4	100	4,000	5	900	3,000
Woodworking, furniture, etc.....	17	1,400	15,000	23	3,300	88,000
Paper, printing, etc.....	2	400	20,000	6	800	7,000
Building, public works, contracting.....	40	3,300	28,000	47	3,800	46,000
Transport.....	21	7,200	13,000	22	5,200	25,000
Commerce, distribution, and finance.....	5	300	3,000	5	3,500	51,000
Other.....	13	500	2,000	14	1,300	9,000
Total.....	431	533,800	8,287,000	422	308,700	4,399,000

It will be noticed that while in 1929 the greatest loss of time occurred in the cotton-textile industry, in which one dispute accounted for over three-fourths of the total time lost, in 1930 there was comparatively little trouble in that industry, the principal difficulties occurring in the wool-textile and mining industries. In wool textiles, as in cotton textiles the year before, most of the loss was due to one dispute in which 120,000 workers were involved, while the aggregate duration in working-days was 3,258,000.

Next to the woolen-textile industry, mining showed the greatest degree of disturbance in 1930. By the coal mines act of 1930, hours



were reduced from 8 to 7½ a day, and disagreements arose as to the terms of employment under the new act from December 1, onward. At that date stoppages occurred involving about 76,000 workers in Scotland, 6,000 in North Staffordshire, and 3,000 in Shropshire and other districts. Temporary settlements were effected very promptly in most cases, though in Scotland the dispute lasted for a week. The total aggregate duration of these stoppages exceeded 440,000 working days.

No other disputes in 1930 involved as many as 5,000 workers, but three involved losses of between 50,000 and 70,000 working-days. The first of these occurred in February and involved 3,250 insurance agents, who were not satisfied with their remuneration. The general council of the Trades Union Congress undertook to act as mediators and effected a compromise, the agents waiving their other claims in consideration of a guaranteed minimum rate of 50s. (\$12.17) a week. The second, which began in June, involved 1,250 upholstery workers, who asked an advance in wages, limitation of junior labor and other improvements in working conditions. A settlement was effected in August, "providing for a resumption of work at the old rate of wages and for further consideration of the question of junior labor, the other matters in dispute being settled provisionally." The third involved 620 silk knitters who ceased work in October in resistance to a proposed reduction in wages, and remained out until February 25, 1931, when the reduction was accepted with some modifications.

#### Causes of Disputes

IN SOME cases a dispute may have several causes, as, for instance, a claim for an increase in wages may be accompanied by a proposal for reducing working hours. Trying in each case to attribute the dispute to its principal cause, the ministry presents the following table, showing the number and percentage of disputes in 1930, and of workers directly involved in them, by the cause of dispute:

TABLE 2.—CAUSES OF INDUSTRIAL DISPUTES IN GREAT BRITAIN AND NORTHERN IRELAND, 1930

Principal cause	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
Wage increases.....	38	9.0	10,600	3.7
Wage decreases.....	91	21.6	125,600	43.9
Other wage questions.....	119	28.2	18,700	6.5
All wage questions.....	248	58.8	154,900	54.1
Hours of labor.....	19	4.5	96,700	33.8
Employment of particular classes or persons.....	79	18.7	17,300	6.1
Other working arrangements, rules, or discipline.....	46	10.9	11,800	4.1
Trade-unionism.....	28	6.6	5,100	1.8
Other.....	2	.5	300	.1
Total.....	422	100.00	286,100	100.0

Wage questions account for more disputes than any other cause, and it is noticeable that in 1930 the most serious of these disagreements were in resistance to wage reductions while the efforts to secure wage increases were responsible for only 9 per cent of the stoppages

and only 3.7 per cent of the workers directly involved. Disagreements over hours of labor caused only a small proportion of the disputes but involved more workers than any other cause except wage questions. Trade-unionism seemed an unimportant cause, both as respects number of disputes and number of workers involved.

### Results of Disputes

THE RESULTS of the disputes which began in 1930 are shown in the following table:

TABLE 3.—RESULTS OF INDUSTRIAL DISPUTES, BEGINNING IN 1930 IN GREAT BRITAIN AND NORTHERN IRELAND

Results	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
In favor of workers.....	71	16.8	17,900	6.2
In favor of employers.....	155	36.7	222,500	77.8
Compromised.....	196	46.5	45,700	16.0
Total.....	422	100.00	286,100	100.0

### Methods of Settlement

THE FOLLOWING table shows the number and percentage of disputes settled by each principal method, with the number and proportion of workers directly involved:

TABLE 4.—METHODS OF SETTLEMENT

Method of settlement	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
Direct negotiations.....	265	62.8	173,700	60.7
Conciliation.....	39	9.3	87,600	30.6
Arbitration.....	9	2.1	3,100	1.1
Return to work on employers' terms without negotiations.....	68	16.1	19,900	7.0
Replacement of workers.....	32	7.6	1,100	.4
Otherwise.....	9	2.1	700	.2
Total.....	422	100.0	286,100	100.0

## LABOR TURNOVER

### Labor Turnover in American Factories, May, 1931

**L**ABOR turnover rates for manufacturing as a whole and for 10 separate manufacturing industries are shown herewith.

In working turnover rates the Bureau of Labor Statistics uses the weighted arithmetic mean. The indexes for manufacturing as a whole are compiled from reports made to the Bureau of Labor Statistics by representative establishments in over 75 industries, employing approximately 1,250,000 people. In the 10 industries for which separate indexes are presented reports were received from representative plants employing approximately 25 per cent of the employees as shown for such industries by the Census of Manufactures of 1927. In the automotive industry schedules were received from plants employing more than 225,000 people. Firms reporting for boots and shoes employed nearly 100,000 people; those for cotton manufacturing employed approximately 125,000 people; those for brick employed about 15,000 people; those for foundry and machine shops employed nearly 175,000 people; for furniture, about 45,000 people; iron and steel, over 225,000 people; sawmills, approximately 65,000 people; men's clothing, nearly 50,000 people; and slaughtering and meat packing, about 85,000 people.

Table 1 shows for all industries the total separation rate subdivided into the quit, discharge, and lay-off rates, together with the accession and net turnover rates, presented both on a monthly and an equivalent annual basis.



TABLE 1.—AVERAGE LABOR TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES

## A.—Monthly Rates

Month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Lay-off		Discharge		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
January.....	1.85	0.74	2.70	1.95	0.54	0.19	5.09	2.88	3.95	2.97	3.95	2.88
February.....	1.60	.74	2.50	1.75	.62	.20	4.72	2.69	3.94	2.82	3.94	2.69
March.....	1.94	.94	2.83	1.75	.60	.26	5.37	2.95	4.15	3.67	4.15	2.95
April.....	2.11	1.14	2.57	1.96	.53	.31	5.21	3.41	3.55	3.06	3.55	3.06
May.....	2.01	1.12	2.68	2.43	.48	.28	5.17	3.83	3.28	2.79	3.28	2.79
June.....	1.85	-----	3.00	-----	.46	-----	5.31	-----	2.92	-----	2.92	-----
July.....	1.35	-----	4.17	-----	.32	-----	5.84	-----	2.51	-----	2.51	-----
August.....	1.40	-----	3.99	-----	.36	-----	5.75	-----	2.71	-----	2.71	-----
September.....	1.50	-----	3.14	-----	.36	-----	5.00	-----	3.27	-----	3.27	-----
October.....	1.29	-----	2.88	-----	.32	-----	4.49	-----	2.56	-----	2.56	-----
November.....	.99	-----	2.77	-----	.24	-----	3.91	-----	2.05	-----	2.05	-----
December.....	.84	-----	2.74	-----	.21	-----	3.79	-----	2.13	-----	2.13	-----
Average.....	1.55	-----	3.00	-----	.42	-----	4.97	-----	3.68	-----	3.68	-----

## B.—Equivalent Annual Rates

January.....	21.8	8.7	31.8	23.0	6.4	2.2	60.0	33.9	46.5	35.0	46.5	33.9
February.....	20.9	9.6	32.6	22.8	8.0	2.6	61.5	35.0	51.4	36.8	51.4	35.0
March.....	22.8	11.1	33.3	20.6	7.1	3.1	63.2	34.8	48.8	43.2	48.8	34.8
April.....	25.7	13.9	31.3	23.9	6.5	3.8	63.5	41.6	43.2	37.2	43.2	37.2
May.....	23.7	13.2	31.5	28.6	5.6	3.3	60.8	45.1	38.6	32.8	38.6	32.8
June.....	22.5	-----	36.5	-----	5.6	-----	64.6	-----	35.5	-----	35.5	-----
July.....	15.9	-----	49.1	-----	3.8	-----	68.8	-----	29.5	-----	29.5	-----
August.....	16.5	-----	47.0	-----	4.2	-----	67.7	-----	31.9	-----	31.9	-----
September.....	18.3	-----	38.2	-----	4.4	-----	60.9	-----	39.8	-----	39.8	-----
October.....	15.2	-----	33.9	-----	3.8	-----	52.9	-----	30.1	-----	30.1	-----
November.....	11.0	-----	33.7	-----	2.9	-----	47.6	-----	24.9	-----	24.9	-----
December.....	9.9	-----	32.2	-----	2.5	-----	44.6	-----	25.1	-----	25.1	-----
Average.....	18.7	-----	35.9	-----	5.1	-----	59.7	-----	37.1	-----	37.1	-----

The total separation rate for industry as a whole for the month of May was 3.83 and the accession rate was 2.79. Comparing the May, 1931, rates with those for April, 1931, there was a decrease in the quit, discharge, and accession rates. The lay-off rate, however, showed an increase. Comparing the May, 1931, with those for May, 1930, decreases were shown for all classes of separation and for accessions.

In addition to the quit, discharge, lay-off, total separation, and accession rates, the bureau presents the net turnover rate. The net turnover rate means the rate of replacement. It is the number of jobs that are vacated and filled per 100 employees. In a plant that is increasing its force the net turnover rate is the same as the separation rate, because while more people are hired than are separated from their jobs the number hired above those leaving is due to expansion, and can not be justly charged to turnover. On the other hand, in a plant that is reducing its number of employees the net turnover rate is the same as the accession rate, for while more people are separated from the pay roll than are hired the excess of separations over accessions is due to a reduction of force and therefore can not be logically charged as a turnover expense.

The charts on pages 138 and 139 show in graphic form the data presented in Table 1.

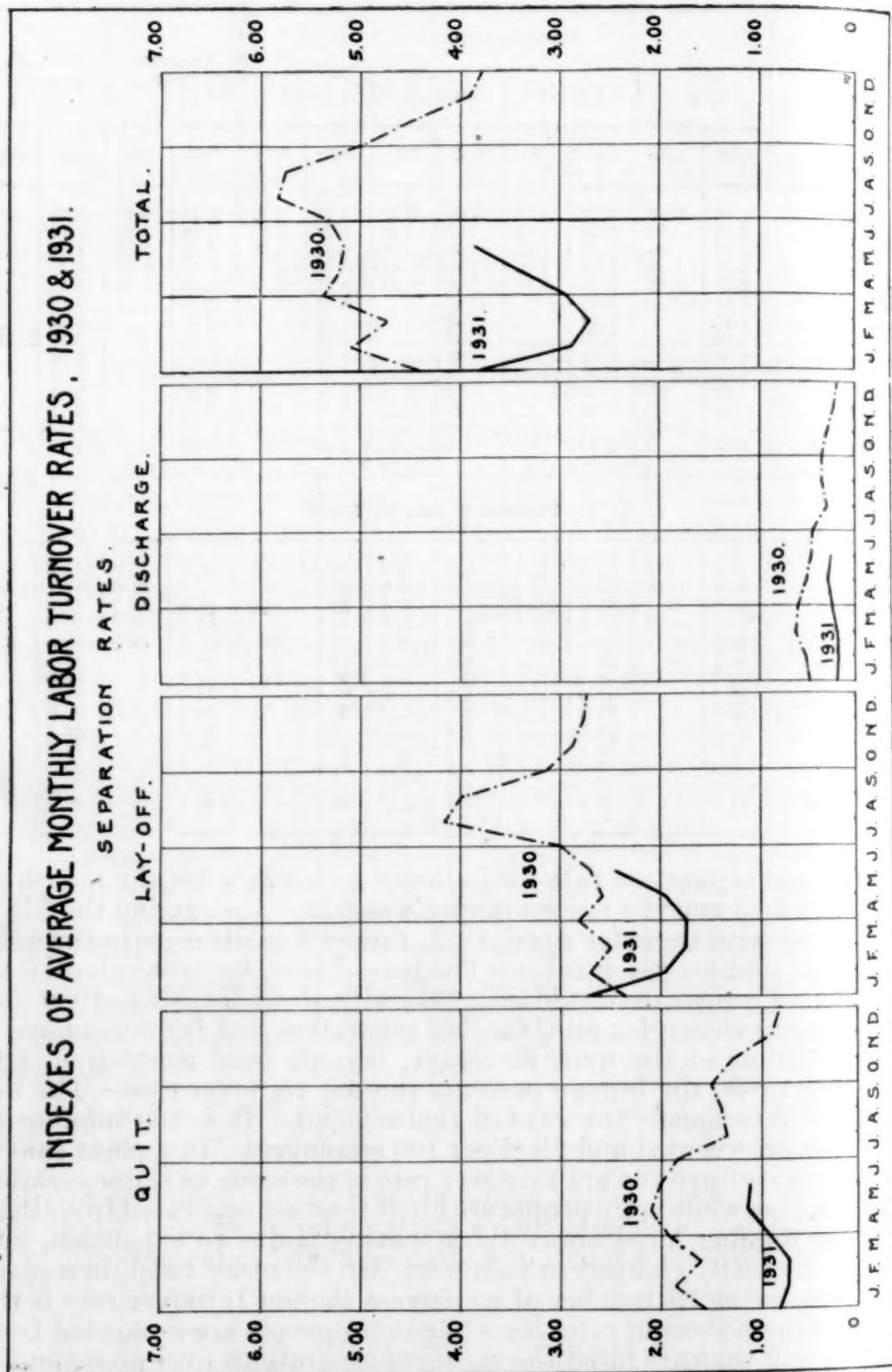
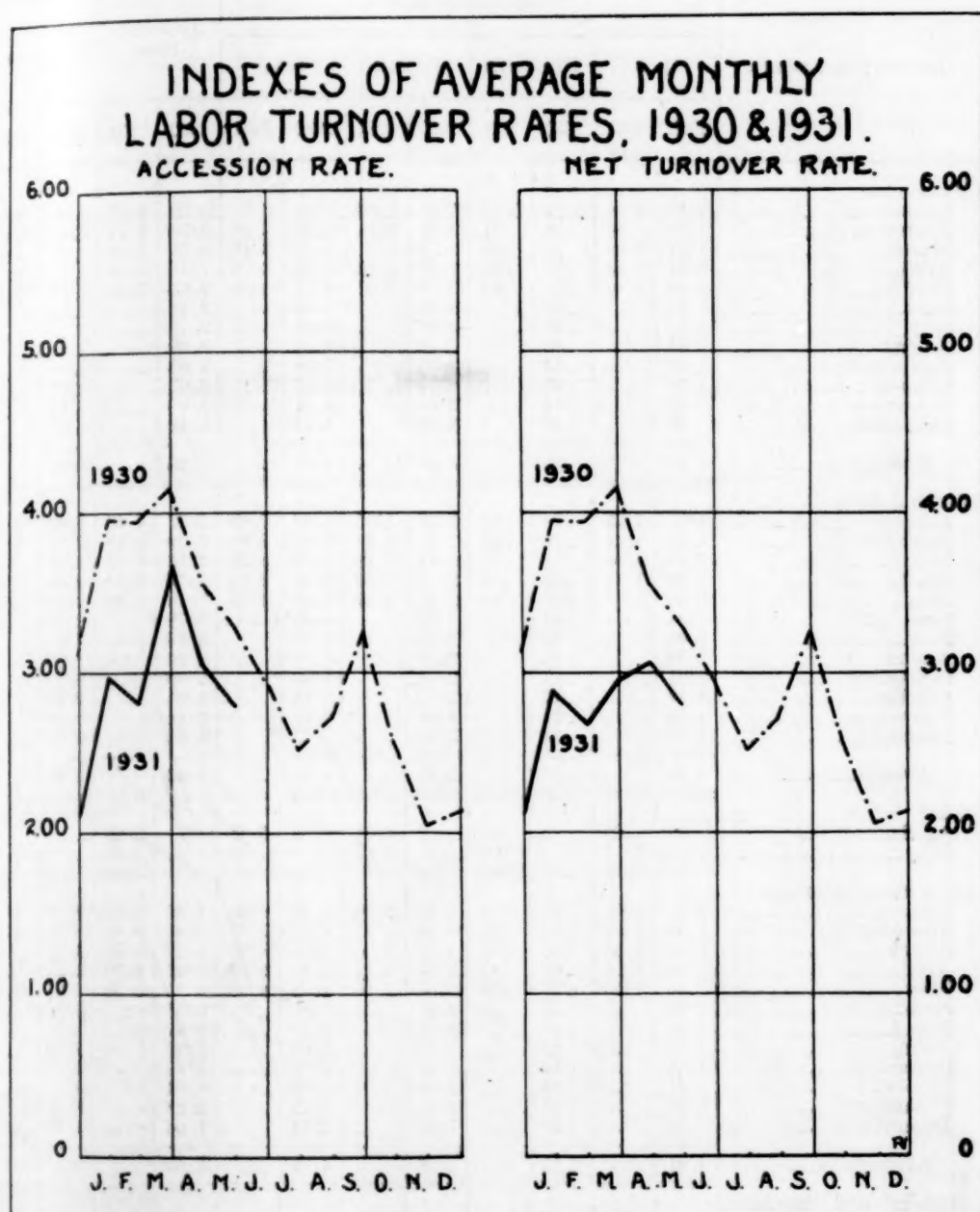


Table 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles, boots and shoes, cotton, foundry and machine shops, furniture, iron and steel, sawmills, and slaughtering



and meat packing for the year 1930 and for the first five months of 1931, and for brick and men's clothing for April and May, 1931, presented both on a monthly and an equivalent annual basis.



TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES

## A.—Monthly Rates

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total		1930	1931	1930	1931
	1930	1931	1930	1931	1930	1931	1930	1931				
Automobiles:												
January	2.76	0.54	0.92	0.18	5.81	2.63	9.49	3.35	13.50	2.92	9.49	2.92
February	1.16	.74	.38	.21	2.31	1.71	3.85	2.66	4.74	4.12	3.85	2.66
March	1.81	1.09	.56	.39	2.04	1.71	4.41	3.19	6.92	7.76	4.41	3.19
April	2.21	1.46	.50	.44	1.97	1.86	4.68	3.76	7.45	5.21	4.68	3.76
May	2.20	1.40	.50	.39	5.59	3.07	8.29	4.86	3.98	3.41	3.98	3.41
June	1.59		.39		5.90		7.88		2.34		2.34	
July	1.14		.24		9.48		10.86		2.78		2.78	
August	1.23		.38		7.66		9.27		3.69		3.69	
September	1.29		.33		7.42		9.04		3.83		3.83	
October	1.19		.25		5.39		6.83		4.02		4.02	
November	.81		.16		3.80		4.77		5.95		4.77	
December	.88		.17		3.69		4.74		3.43		3.43	
Average	1.52		.40		5.09		7.01		5.22		5.22	
Boots and shoes:												
January	1.97	1.23	.78	.37	1.27	1.88	4.02	3.48	5.97	4.48	4.02	3.48
February	1.93	1.27	.70	.31	1.37	1.23	4.00	2.81	3.09	5.88	3.09	2.81
March	2.00	1.58	.65	.50	1.34	1.16	3.99	3.24	3.18	4.92	3.18	3.24
April	2.48	1.97	.68	.42	2.13	1.53	5.29	3.92	2.76	4.34	2.76	3.92
May	2.06	1.57	.53	.49	2.47	2.37	5.06	4.43	3.19	4.95	3.19	4.43
June	1.94		.47		1.82		4.23		3.78		3.78	
July	2.04		.57		1.76		4.37		4.74		4.37	
August	2.19		.73		2.84		5.76		4.08		4.08	
September	2.01		.51		2.78		5.30		2.99		2.99	
October	1.71		.47		2.73		4.91		2.05		2.05	
November	1.00		.27		4.38		5.65		2.41		2.41	
December	1.03		.24		3.88		5.15		3.66		3.66	
Average	1.86		.55		2.40		4.81		3.49		3.30	
Brick:												
April		.86		.61		4.01		5.48		8.68		5.48
May		1.77		.66		8.65		11.08		7.89		7.89
Cotton manufacturing:												
January	2.07	1.00	.65	.40	2.16	2.00	4.88	4.00	4.50	3.57	4.50	3.57
February	1.98	1.00	.60	.34	1.92	1.87	4.50	3.21	3.33	3.91	3.33	3.21
March	2.27	1.36	.69	.36	2.20	2.00	5.16	3.72	4.17	4.47	4.17	3.72
April	2.40	1.64	.68	.43	2.23	2.52	5.31	4.59	4.27	4.69	4.27	4.59
May	2.36	1.53	.55	.37	2.07	2.30	4.98	4.20	3.95	3.51	3.95	3.51
June	2.06		.58		2.17		4.81		3.25		3.25	
July	1.91		.55		3.34		5.80		2.47		2.47	
August	1.58		.46		3.58		5.62		2.72		2.72	
September	1.88		.46		2.44		4.78		4.58		4.58	
October	1.41		.48		2.09		3.98		4.34		3.98	
November	1.22		.35		2.18		3.75		2.93		2.93	
December	.58		.24		1.92		2.74		1.46		1.46	
Average	1.81		.52		2.36		4.69		3.50		3.47	
Foundries and machine shops:												
January		.52		.22		2.32		3.06		2.93		2.93
February	1.36	.55	.80	.22	2.03	2.10	4.19	2.87	4.39	2.96	4.19	2.87
March	1.88	.90	.88	.25	3.24	2.72	6.00	3.87	4.63	3.38	4.63	3.38
April	1.88	.96	.80	.36	2.87	3.29	5.55	4.61	3.95	3.08	3.95	3.08
May	1.87	.77	.79	.25	4.12	4.91	6.78	5.93	3.76	2.44	3.76	2.44
June	1.29		.54		4.52		6.35		3.05		3.05	
July	1.11		.43		4.58		6.12		2.26		2.26	
August	1.01		.45		4.08		5.54		2.56		2.56	
September	1.07		.44		3.82		5.33		2.45		2.45	
October	.85		.47		4.01		5.33		2.27		2.27	
November	.66		.22		2.87		3.75		1.85		1.85	
December	.55		.26		3.10		3.91		2.05		2.05	
Average	1.23		.55		3.57		5.35		3.02		3.02	

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Contd.

## A.—Monthly Rates—Continued

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
Furniture:												
January		0.55		0.25		4.84		5.64		5.24		5.24
February		.57		.34		3.86		4.77		5.51		4.77
March		.80		.37		4.72		5.69		4.78		4.78
April	1.73	.95	.64	.51	4.38	3.31	6.75	4.77	3.34	4.66	3.34	4.66
May	1.26	1.05	.52	.25	4.39	5.72	6.17	7.02	2.87	3.81	2.87	3.81
June	1.44		.41		4.33		6.18		3.82		3.82	
July	1.21		.40		4.50		6.11		5.09		5.09	
August	1.18		.41		3.45		5.64		5.34		5.34	
September	1.09		.46		3.30		4.85		7.07		4.85	
October	1.03		.45		3.61		5.09		3.72		3.72	
November	.99		.29		5.92		7.20		2.48		2.48	
December	.68		.35		6.66		7.69		2.35		2.35	
Average	1.18		.44		4.50		6.12		4.01		4.01	
Iron and steel:												
January	1.81	.71	.45	.09	1.24	1.36	3.50	2.16	5.52	2.52	3.50	2.16
February	1.91	.72	.34	.15	1.15	1.03	3.40	1.90	5.09	2.24	3.40	1.90
March	1.91	.71	.45	.12	1.22	1.38	3.58	2.21	4.06	2.03	3.58	2.03
April	2.26	.89	.42	.15	1.32	1.90	4.09	2.94	3.88	1.69	3.88	1.69
May	2.13	.87	.40	.15	1.71	2.16	4.24	3.18	3.25	1.57	3.25	1.57
June	1.87		.49		2.25		4.61		2.56		2.56	
July	1.54		.24		2.29		4.07		2.27		2.27	
August	1.61		.26		2.05		3.92		1.91		1.91	
September	1.45		.22		2.16		3.83		2.32		2.32	
October	1.13		.20		2.25		3.58		1.74		1.74	
November	1.11		.13		1.95		3.19		1.31		1.31	
December	.82		.10		2.23		3.15		1.40		1.40	
Average	1.63		.31		1.82		3.76		2.94		2.94	
Men's clothing:												
April		1.40		.12		2.20		3.72		3.22		3.22
May		1.39		.15		1.46		3.00		3.10		3.00
Sawmills:												
January	3.80	.97	1.18	.43	4.52	8.02	9.50	9.42	9.39	9.99	9.39	9.42
February	3.39	1.22	1.37	.50	3.99	4.56	8.75	6.28	9.11	7.44	8.75	6.28
March	3.89	1.74	1.47	.51	3.54	4.56	8.90	6.81	7.91	7.07	7.91	6.81
April	4.28	1.79	.92	.46	4.97	7.17	10.17	9.42	9.66	7.21	9.66	7.21
May	3.51	1.73	1.35	.50	8.10	6.43	12.96	8.66	10.09	7.97	10.09	7.97
June	2.93		.96		5.35		9.24		5.85		5.85	
July	2.68		1.07		6.98		10.73		6.17		6.17	
August	3.01		.93		6.09		10.03		6.71		6.71	
September	2.99		.95		7.64		11.58		6.93		6.93	
October	2.26		.72		6.58		9.56		8.32		8.32	
November	1.93		.83		7.23		9.99		4.96		4.96	
December	1.39		.93		7.42		9.74		4.51		4.51	
Average	3.01		1.06		6.03		10.10		7.47		7.47	
Slaughtering and meat packing:												
January	2.32	1.29	.91	.61	6.68	4.40	9.91	6.30	10.02	9.50	9.91	6.30
February	2.37	1.56	.96	.68	7.70	6.48	11.03	8.72	7.39	5.02	7.39	5.02
March	2.49	1.41	.86	.37	7.51	6.88	10.86	8.66	5.23	5.19	5.23	5.19
April	2.91	1.42	.75	.47	4.47	5.02	8.13	6.91	8.47	6.31	8.13	6.31
May	2.84	1.35	.79	.43	4.14	4.13	7.77	5.91	9.01	6.92	7.77	5.91
June	2.72		.88		4.59		8.19		10.34		8.19	
July	2.08		.79		5.34		8.21		6.92		6.92	
August	2.09		.72		5.14		7.95		6.34		6.34	
September	2.26		.65		3.79		6.70		7.33		6.70	
October	1.70		.73		4.67		7.10		7.62		7.10	
November	1.12		.56		4.80		6.48		7.30		6.48	
December	1.69		.57		5.59		7.85		6.24		6.24	
Average	2.22		.76		5.37		8.35		7.68		7.68	

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Contd.

## B.—Equivalent Annual Rates

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total		1930	1931	1930	1931
	1930	1931	1930	1931	1930	1931	1930	1931				
Automobiles:												
January	32.5	6.4	10.8	2.1	68.4	31.0	111.7	39.5	158.9	34.4	111.7	34.4
February	15.1	9.6	5.0	2.7	30.1	22.3	50.2	34.6	61.8	53.7	50.2	34.6
March	21.3	12.8	6.6	4.6	24.0	20.1	51.9	37.5	81.4	91.3	51.9	37.5
April	26.9	17.8	6.1	5.4	24.0	22.6	57.0	45.8	90.7	63.4	57.0	45.8
May	25.9	16.5	5.9	4.6	65.8	36.1	97.6	57.2	46.8	40.1	46.8	40.1
June	19.4		4.7		71.8		95.9		28.5		28.5	
July	13.4		2.8		111.6		127.8		32.7		32.7	
August	14.5		4.5		90.2		109.2		43.4		43.4	
September	15.7		4.0		90.3		110.0		46.6		46.6	
October	14.0		2.9		63.4		80.3		47.3		47.3	
November	9.9		1.9		46.2		58.0		72.4		58.0	
December	10.4		2.0		43.4		55.8		40.4		40.4	
Average	18.3		4.8		60.8		83.8		62.6		62.6	
Boots and shoes:												
January	23.2	14.5	9.2	4.4	14.9	22.1	47.3	41.0	70.3	52.7	47.3	41.0
February	25.2	16.6	9.1	4.0	17.9	16.0	52.2	36.6	40.3	76.7	40.3	36.6
March	23.5	18.6	7.7	5.9	15.8	13.7	47.0	38.2	37.4	57.9	37.4	38.2
April	30.2	24.0	8.3	5.1	25.9	18.6	64.4	47.7	33.6	52.8	33.6	47.7
May	24.2	18.5	6.2	5.8	29.1	27.9	59.5	52.2	37.5	58.3	37.5	52.2
June	23.6		5.7		22.1		51.4		46.0		46.0	
July	24.0		6.7		20.7		51.4		55.8		51.4	
August	25.8		8.6		33.4		67.8		48.0		48.0	
September	24.5		6.2		33.8		64.5		36.4		36.4	
October	20.1		5.5		32.1		57.7		24.1		24.1	
November	12.2		3.3		53.3		68.8		29.3		29.3	
December	12.1		2.8		45.7		60.6		43.1		43.1	
Average	22.4		6.6		23.7		57.7		41.8		41.8	
Brick:												
April		10.5		7.4		48.8		66.7		105.6		66.7
May		20.8		7.8		101.8		130.4		92.9		92.9
Cotton manufacturing:												
January	24.4	11.8	7.7	4.7	25.4	30.6	57.5	47.1	53.0	42.0	53.0	42.0
February	25.8	13.0	7.8	4.4	25.0	24.4	58.6	41.8	43.4	51.0	43.4	41.8
March	26.7	16.0	8.1	4.2	25.9	23.5	60.7	43.7	49.1	52.6	49.1	43.7
April	29.2	20.0	8.3	5.2	27.1	30.7	64.6	55.9	52.0	57.1	52.0	55.9
May	27.8	18.0	6.5	4.4	24.4	27.1	58.7	49.5	46.5	41.3	46.5	41.3
June	25.1		7.1		26.4		58.6		39.6		39.6	
July	22.5		6.5		39.3		68.3		29.1		29.1	
August	18.6		5.4		42.1		66.1		32.0		32.0	
September	22.9		5.6		29.7		58.2		55.7		55.7	
October	16.6		5.6		24.6		46.8		51.1		46.8	
November	14.8		4.3		26.5		45.6		35.7		35.7	
December	6.8		2.8		22.6		32.2		17.2		17.2	
Average	21.8		6.3		28.3		56.3		42.0		41.7	
Foundries and machine shops:												
January		6.1		2.6		27.3		36.0		34.5		34.5
February	17.7	7.2	10.4	2.9	26.5	27.4	54.6	37.5	57.2	38.6	54.6	37.5
March	22.1	10.6	10.4	2.9	38.1	32.0	70.6	45.5	54.5	39.8	54.5	39.8
April	22.9	11.7	9.7	4.4	34.9	40.0	67.5	56.1	48.1	37.5	48.1	37.5
May	22.0	9.1	9.3	2.9	48.5	57.8	79.8	69.8	44.3	28.7	44.3	28.7
June	15.7		6.6		55.0		77.3		37.1		37.1	
July	13.1		5.1		53.9		72.1		26.6		26.6	
August	11.9		5.3		48.0		65.2		30.1		30.1	
September	13.0		5.4		46.5		64.9		29.8		29.8	
October	10.0		5.5		47.2		62.7		26.7		26.7	
November	8.0		2.7		34.9		45.6		22.5		22.5	
December	6.5		3.1		36.5		46.1		24.1		24.1	
Average	14.8		6.7		42.7		64.2		36.5		36.5	



TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Contd.

## B.—Equivalent Annual Rates—Continued

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
<b>Furniture:</b>												
January		6.5		2.9		57.0		66.4		61.7		61.7
February		7.4		4.4		50.3		62.1		71.9		62.1
March		9.4		4.4		53.2		67.0		56.3		56.3
April	21.1	11.6	7.8	6.2	53.3	40.3	82.2	58.1	40.6	56.7	40.6	56.7
May	14.8	12.4	6.1	2.9	51.6	67.3	72.5	82.6	33.8	44.8	33.8	44.8
June	17.5		5.0		52.7		75.2		46.5		46.5	
July	14.2		4.7		53.0		71.9		59.9		59.9	
August	13.9		4.8		40.6		59.3		62.9		59.3	
September	13.3		5.6		40.2		59.1		86.0		59.1	
October	12.1		5.3		42.5		59.9		43.8		43.8	
November	12.0		3.5		72.0		87.5		30.2		30.2	
December	8.0		4.1		78.4		90.5		27.7		27.7	
Average	14.1		5.2		53.8		73.1		47.9		47.9	
<b>Iron and steel:</b>												
January	21.3	8.4	5.3	1.1	14.6	16.0	41.2	25.5	65.0	29.7	41.2	25.5
February	24.9	9.4	4.4	2.0	15.0	13.4	44.3	24.8	66.4	29.2	44.3	24.8
March	22.5	8.4	5.3	1.4	14.4	16.2	42.2	26.0	47.8	23.9	42.2	23.9
April	27.5	10.8	5.1	1.8	16.1	23.1	48.7	35.7	47.2	20.6	47.2	20.6
May	25.1	10.2	4.7	1.8	20.1	25.4	49.9	37.4	38.3	18.5	38.3	18.5
June	22.8		6.0		27.4		56.2		31.2		31.2	
July	18.1		2.8		27.0		47.9		26.7		26.7	
August	18.9		3.1		24.1		46.1		22.5		22.5	
September	17.6		2.7		26.3		46.6		28.2		28.2	
October	13.3		2.4		26.5		42.2		20.5		20.5	
November	13.5		1.6		23.7		38.8		15.9		15.9	
December	9.7		1.2		26.2		37.1		16.5		16.5	
Average	19.6		3.7		21.8		45.1		35.5		35.5	
<b>Men's clothing:</b>												
April		17.0		1.5		26.8		45.3		39.2		39.2
May		16.4		1.8		17.2		35.4		36.5		35.4
<b>Sawmills:</b>												
January	44.7	11.4	13.9	5.1	53.2	94.4	111.8	110.91	110.5	117.6	110.5	110.9
February	44.2	15.9	17.9	6.5	52.0	59.5	114.1	81.91	118.8	97.0	114.1	81.9
March	45.8	20.5	17.3	6.0	41.7	53.7	104.8	80.2	93.1	83.2	93.1	80.2
April	52.1	21.8	11.2	5.6	60.5	87.3	123.8	114.7	117.6	87.7	117.6	87.7
May	41.3	20.4	15.9	5.9	95.3	75.7	152.5	102.0	118.8	93.8	118.8	93.8
June	35.7		11.7		65.1		112.5		71.2		71.2	
July	31.5		12.6		82.2		126.3		72.6		72.6	
August	35.4		10.9		71.7		118.0		79.0		79.0	
September	36.4		11.6		93.0		141.0		84.3		84.3	
October	26.6		8.5		77.4		112.5		97.9		97.9	
November	23.5		10.1		88.0		121.6		60.4		60.4	
December	16.4		10.9		87.3		114.6		53.1		53.1	
Average	36.1		12.7		72.3		121.1		89.8		89.8	
<b>Slaughtering and meat packing:</b>												
January	27.3	15.2	10.7	7.2	78.6	51.8	116.6	74.2	117.9	111.8	116.6	74.2
February	30.9	20.3	12.5	8.9	100.4	84.5	143.8	113.7	96.4	65.5	96.4	65.5
March	29.3	16.6	10.1	4.4	88.4	81.0	127.8	102.0	61.6	61.1	61.6	61.1
April	35.4	17.3	9.1	5.7	54.4	61.1	98.9	84.1	103.1	76.8	98.9	76.8
May	33.4	15.9	9.3	5.1	48.7	48.6	91.4	69.6	106.0	81.4	91.4	69.6
June	33.1		10.7		55.9		99.7		125.8		99.7	
July	24.5		9.3		62.9		96.7		81.4		81.4	
August	24.6		8.5		60.5		93.6		74.6		74.6	
September	27.5		7.9		46.1		81.5		89.2		81.5	
October	20.0		8.6		55.0		83.6		89.7		83.6	
November	13.6		6.8		58.4		78.8		88.8		78.8	
December	19.9		6.7		65.8		92.4		73.4		73.4	
Average	26.6		9.2		64.6		100.4		92.3		92.3	

# HOUSING

## Building Permits in Principal Cities, May, 1931

THE Bureau of Labor Statistics has received reports of building operations from 342 identical cities having a population of 25,000 or over for the months of April, 1931, and May, 1931, and from 295 identical cities for the months of May, 1930, and May, 1931.

The cost figures shown in the following tables apply to the cost of the buildings as estimated by the prospective builders upon applying for their permits to build. No land costs are included. Only buildings within the corporate limits of the cities enumerated are shown.

The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 342 identical cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS IN 342 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN APRIL AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	April, 1931	May, 1931	April, 1931	May, 1931	April, 1931	May, 1931	April, 1931	May, 1931
New England.....	\$4, 117, 420	\$3, 542, 050	816	688	\$3, 285, 449	\$4, 946, 899	\$9, 233, 639	\$10, 607, 832
Middle Atlantic.....	28, 815, 173	21, 909, 744	6, 706	4, 892	44, 520, 260	25, 975, 351	82, 206, 684	53, 961, 736
East North Central.....	7, 753, 873	6, 554, 248	1, 524	1, 315	11, 428, 472	13, 493, 378	23, 757, 677	23, 151, 935
West North Central.....	2, 934, 187	2, 610, 740	713	663	8, 484, 102	6, 338, 741	12, 355, 996	10, 175, 194
South Atlantic.....	6, 314, 945	6, 262, 760	1, 424	1, 142	1, 747, 909	3, 008, 370	10, 015, 161	11, 321, 496
South Central.....	3, 339, 043	2, 172, 665	974	752	6, 213, 852	2, 720, 000	10, 594, 384	5, 766, 611
Mountain and Pacific.....	7, 095, 359	6, 439, 067	2, 051	1, 919	4, 516, 763	6, 957, 603	13, 873, 210	15, 413, 784
Total.....	60, 370, 000	49, 491, 274	14, 208	11, 371	80, 196, 807	63, 440, 342	162, 036, 751	130, 298, 526
Per cent of change.....		-18. 0		-20. 0		-20. 9		-19. 5

The estimated cost of all building operations for which permits were issued during the month of May, 1931, was \$130,398,526, a decrease of 19.5 per cent as compared with the estimated cost of the total building operations for which permits were issued during the month of April, 1931. New residential buildings decreased 18.0 per cent in estimated cost and new nonresidential buildings decreased 20.9 per cent, comparing May permits with April permits. The new residential buildings for which permits were issued during the month of May were planned to provide 11,371 family dwelling units. This is a decrease

of 20.0 per cent as compared with the family dwelling permits provided during April.

All geographic divisions show decreases in indicated expenditures for new residential buildings. Increases in indicated expenditures for new nonresidential buildings were shown in the New England States, the East North Central States, the South Atlantic States, and the Mountain and Pacific States. Decreases were registered in the other three geographic divisions. Increases in total construction were registered in the New England States, the South Atlantic States, and the Mountain and Pacific States. Each of the other four geographic divisions registered decreases in total constructions comparing building permits issued in May with those issued in April. Decreases in the number of family dwelling units provided were shown in each of the seven geographic divisions.

Table 2 shows the estimated cost of additions, alterations, and repairs as shown by permits issued together with the per cent of increase or decrease during May, 1931, as compared with April, 1931, in 342 identical cities of the United States, by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 342 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN APRIL AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of increase or decrease in May compared with April
	April, 1931	May, 1931	
New England.....	\$1, 830, 770	\$2, 118, 903	+15. 7
Middle Atlantic.....	8, 871, 251	6, 076, 704	-31. 5
East North Central.....	4, 575, 332	3, 104, 309	-32. 2
West North Central.....	937, 707	1, 225, 663	+30. 7
South Atlantic.....	1, 952, 307	2, 050, 271	+5. 0
South Central.....	1, 041, 489	873, 946	-16. 1
Mountain and Pacific.....	2, 261, 088	2, 017, 114	-10. 8
Total.....	21, 469, 944	17, 466, 910	-18. 6

There was a decrease of 18.6 per cent in the projected expenditures for additions, alterations, and repairs, according to permits issued in these 342 cities, comparing May with April. Decreases were shown in four of the seven geographic divisions ranging from 10.8 per cent in the Mountain and Pacific States to 32.2 per cent in the East North Central States. Increases in the estimated cost of repairs were shown in three geographic divisions, ranging from 5.0 per cent in the South Atlantic States to 30.7 per cent in the West North Central States.

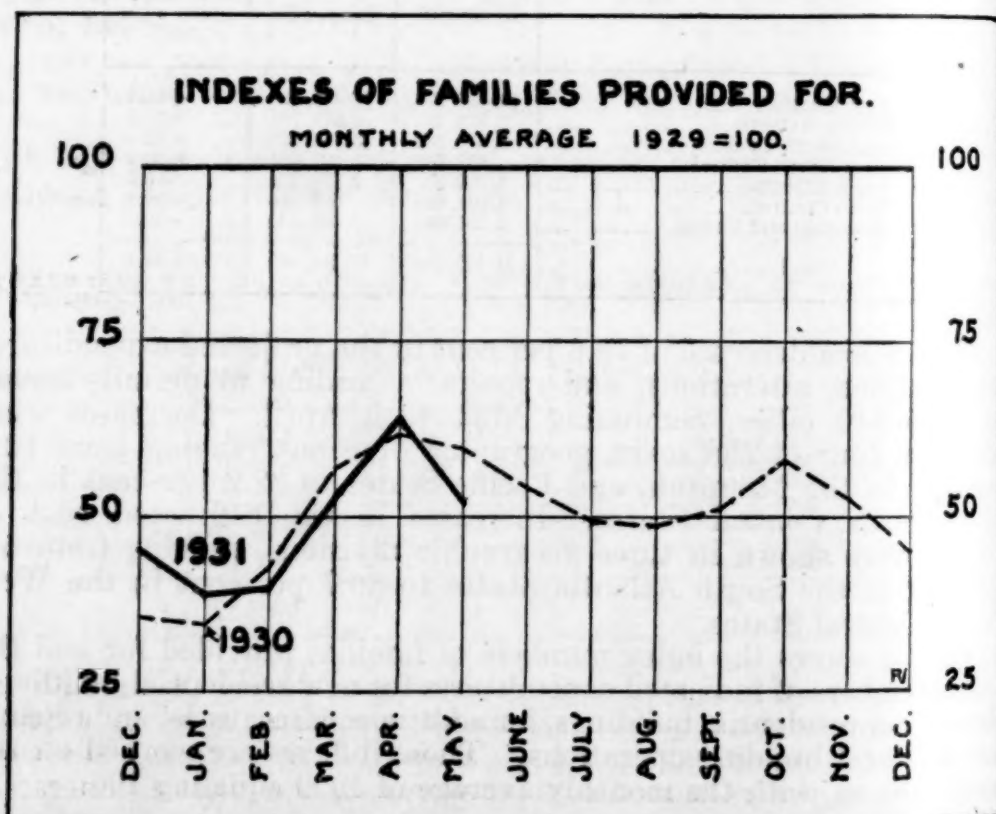
Table 3 shows the index numbers of families provided for and the index numbers of indicated expenditures for new residential buildings, for new nonresidential buildings, for additions, alterations, and repairs, and for total building operations. These indexes are worked on the chain system, with the monthly average of 1929 equaling 100.



TABLE 3.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES, JANUARY, 1930, TO MAY, 1931, INCLUSIVE  
[Monthly average, 1929=100]

Month	Families provided for	Estimated cost of—			
		New residential buildings	New non-residential buildings	Additions, alterations, and repairs	Total building operations
1930					
January.....	34.2	29.4	64.3	55.1	
February.....	43.0	34.7	51.8	57.5	
March.....	57.1	47.2	87.1	77.5	
April.....	62.0	51.0	100.1	81.8	
May.....	59.6	48.5	90.7	84.5	
June.....	54.4	45.1	82.5	74.6	
July.....	49.9	44.1	86.7	77.4	
August.....	48.7	43.4	67.2	58.6	
September.....	51.3	44.4	73.8	64.2	
October.....	58.3	44.9	53.5	58.1	
November.....	52.9	42.5	54.4	37.8	
December.....	45.0	37.6	64.3	53.5	
1931					
January.....	39.1	30.8	43.4	55.5	
February.....	40.3	30.3	43.8	48.6	
March.....	53.4	40.7	76.4	58.0	
April.....	64.6	48.6	73.9	65.2	
May.....	51.7	39.8	58.5	53.0	

The index number of families provided for stands at 51.7 per cent for the month of May, a decrease as compared with May, 1930,



and as compared with April, 1931. The index numbers of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations are all lower than for May, 1930, or for April, 1931.

The chart on page 150 shows, in graphic form, the trend of estimated costs of new residential buildings, of new nonresidential buildings, and of total building operations.

Table 4 shows the dollar value of contracts let for public buildings by the different agencies of the United States Government during the months of April, 1931, and May, 1931, by geographic divisions.

TABLE 4.—CONTRACTS LET FOR PUBLIC BUILDINGS BY DIFFERENT AGENCIES OF THE UNITED STATES GOVERNMENT DURING APRIL AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	April, 1931	May, 1931
New England.....	\$582, 288	\$254, 712
Middle Atlantic.....	1, 168, 840	2, 360, 803
East North Central.....	199, 958	778, 422
West North Central.....	511, 464	3, 074, 500
South Atlantic.....	1, 873, 931	766, 017
South Central.....	2, 718, 846	529, 973
Mountain and Pacific.....	1, 144, 497	2, 403, 626
Total.....	8, 199, 824	10, 168, 053

Contracts were let for United States Government buildings during May, 1931, to cost \$10,168,053. These contracts were let by the following Federal agencies: The United States Capitol Architect; Office of the Quartermaster General, War Department; Bureau of Yards and Docks, Navy Department; Supervising Architect, Treasury Department; and the United States Veterans' Bureau. Whenever a contract is let by the United States Government for a building in a city having a population of 25,000 or over, the cost is included in the estimated cost as shown in the cities enumerated in Table 8.

Table 5 shows the dollar value of contracts awarded by the different State governments for public buildings during the months of April, 1931, and May, 1931, by geographic divisions.

TABLE 5.—CONTRACTS AWARDED FOR PUBLIC BUILDINGS BY THE DIFFERENT STATE GOVERNMENTS DURING APRIL AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	April, 1931	May, 1931
New England.....	\$743, 304	\$190, 103
Middle Atlantic.....	10, 658, 763	2, 386, 498
East North Central.....	135, 448	221, 624
West North Central.....	10, 141	344, 560
South Atlantic.....	166, 292	223, 100
South Central.....	15, 053	7, 497
Mountain and Pacific.....	459, 421	753, 114
Total.....	12, 188, 422	4, 126, 496

Contracts awarded by State governments during the month of May, 1931, total \$4,126,496. Whenever a contract is let by a State government in a city having a population of 25,000 or over, the cost is included in the estimated cost, as shown in the cities enumerated in Table 8.

Table 6 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 295 identical cities having a population of 25,000 or over for May, 1931, and May, 1930, by geographic divisions.

TABLE 6.—ESTIMATED COST OF NEW BUILDINGS IN 295 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN MAY, 1930, AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwellings					
	May, 1930	May, 1931	May, 1930	May, 1931	May, 1930	May, 1931	May, 1930	May, 1931
New England.....	\$4,595,818	\$3,429,850	841	660	\$5,765,163	\$4,886,714	\$12,872,314	\$10,412,630
Middle Atlantic.....	19,199,383	21,789,044	4,023	4,870	29,649,717	24,351,970	61,050,032	52,157,468
East North Central.....	14,621,062	5,896,771	2,517	1,172	21,348,526	13,253,597	40,651,579	22,069,924
West North Central.....	3,236,460	2,610,806	763	663	7,188,691	6,338,741	12,699,249	10,175,144
South Atlantic.....	2,884,264	6,239,460	601	1,129	6,378,763	2,932,096	11,845,332	11,185,860
South Central.....	3,858,117	2,032,426	1,112	699	9,202,975	2,287,503	14,425,956	5,132,489
Mountain and Pacific.....	10,259,398	5,928,867	2,707	1,796	7,596,206	6,807,098	20,709,153	14,674,596
Total.....	58,654,382	47,927,212	12,564	10,989	87,130,041	50,857,719	173,653,615	125,808,120
Per cent of change.....		-18.3		-12.5		-30.2		-27.6

Permits issued in the 295 identical cities, which reported for both May, 1930, and May, 1931, showed a decrease of 27.6 per cent in total building operations in 1931 as compared with the same month of last year. The estimated cost of new residential buildings decreased 18.3 per cent, comparing permits issued in these two periods. The estimated cost of new nonresidential buildings decreased 30.2 per cent. The number of family dwelling units provided decreased 12.5 per cent, comparing permits issued in May, 1931, with those issued in May, 1930.

Increases in indicated expenditures for new residential buildings were shown in the Middle Atlantic States and the South Atlantic States. All other geographic divisions showed decreases in this class of structure.

Decreases in the projected expenditures for new nonresidential buildings were shown in all geographic divisions. Decreases were also shown in the indicated expenditures for total construction in each of the seven geographic divisions.

The number of family dwellings units provided increased in the Middle Atlantic States and the South Atlantic States. Decreases in the number of families provided for were shown in the other five geographic divisions.

Table 7 shows the estimated cost of additions, alterations, and repairs as shown by permits issued, together with the per cent of decrease in May, 1931, as compared with May, 1930.

TABLE 7.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 295 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN MAY, 1930, AND MAY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of change, May, 1931, compared with May, 1930
	May, 1930	May, 1931	
New England.....	\$2,511,333	\$2,096,086	-16.5
Middle Atlantic.....	12,200,932	6,016,454	-50.7
East North Central.....	4,681,991	2,919,556	-37.6
West North Central.....	1,674,158	1,225,603	-26.8
South Atlantic.....	2,582,365	2,014,369	-22.0
South Central.....	1,364,864	812,566	-40.5
Mountain and Pacific.....	2,853,549	1,938,615	-32.1
Total.....	27,869,192	17,023,189	-38.9



Projected expenditures for additions, alterations, and repairs decreased 38.9 per cent in May, 1931, as compared with May, 1930. Decreases were shown in each of the seven geographic divisions. These decreases range from 16.5 per cent in the New England States to 50.7 per cent in the Middle Atlantic States.

Table 8 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations, together with the number of families provided for in new buildings, in 342 identical cities for April, 1931, and May, 1931. Reports were received from 50 cities in the New England States, 70 cities in the Middle Atlantic States, 94 cities in the East North Central States, 24 cities in the West North Central States, 36 cities in the South Atlantic States, 32 cities in the South Central States, and 36 cities in the Mountain and Pacific States.

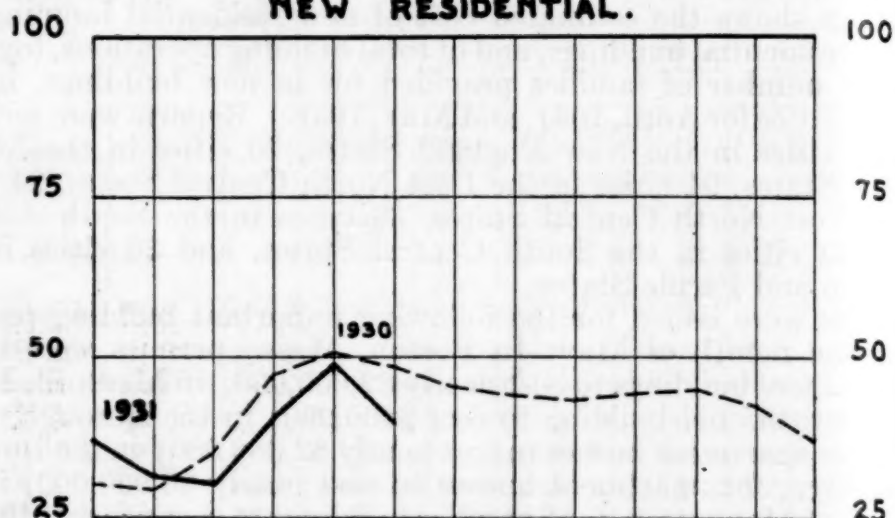
Permits were issued for the following important building projects during the month of May: In Boston, Mass., permits were issued for four school buildings to cost nearly \$2,000,000; in Medford, Mass., for an institutional building to cost \$400,000; in the Borough of the Bronx, for apartment houses to cost nearly \$2,300,000; in the Borough of Brooklyn, for apartment houses to cost nearly \$6,000,000; in the Borough of Manhattan, for five office buildings to cost nearly \$10,000,000; in Syracuse, N. Y., for two office buildings to cost over \$900,000; in White Plains, N. Y., for an office building to cost \$2,000,000; in Reading, Pa., for a public building to cost over \$1,300,000; in Lansing, Mich., for an office building to cost over \$500,000; in Cincinnati, Ohio, for a new union railroad station to cost \$6,000,000; in Dayton, Ohio, for an office building to cost \$1,000,000; in St. Paul, Minn., for a municipal auditorium to cost over \$1,200,000; in Baltimore, Md., for a school building to cost \$675,000; in San Francisco, Calif., for a public building to cost \$1,000,000. The Supervising Architect of the United States Treasury Department let a contract for a post-office building in Kansas City, Mo., to cost nearly \$3,000,000, and for a marine hospital in Seattle, Wash., to cost over \$1,200,000.

No reports were received from New London, Conn.; Taunton, Mass.; Central Falls, R. I.; Newark and Zanesville, Ohio; University City, Mo.; Fargo, N. Dak.; Pensacola, Fla.; Durham, N. C.; Spartanburg, S. C.; Lynchburg, Va.; Lexington, Ky.; Jackson, Miss.; Muskogee, Okla.; Johnson City, Tenn.; Corpus Christi and Galveston, Tex.; and Riverside, Calif.

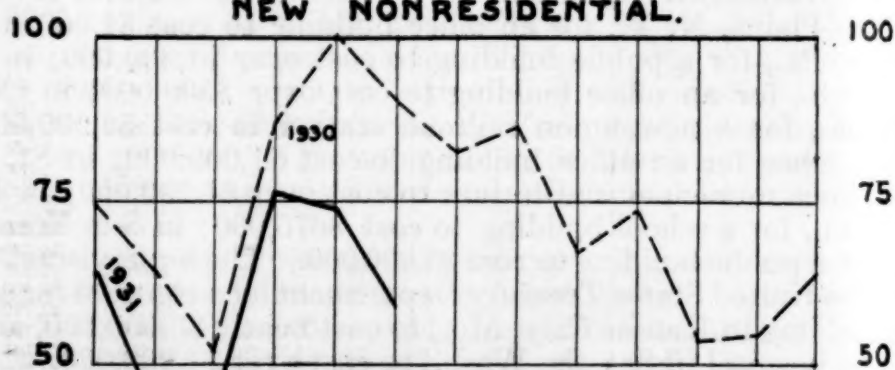
## INDEXES OF COST OF BUILDING OPERATIONS.

MONTHLY AVERAGE 1929=100.

## NEW RESIDENTIAL.



## NEW NONRESIDENTIAL.



## TOTAL-INCLUDING ALTERATIONS &amp; REPAIRS.

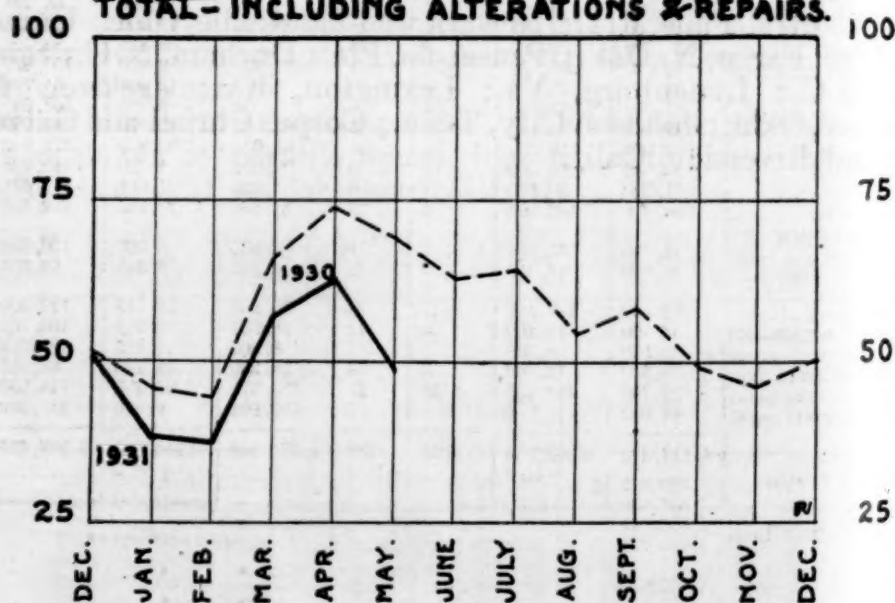


TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931

*New England States*

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
Connecticut:								
Bridgeport.....	\$75,200	\$191,800	19	46	\$83,819	\$7,800	\$174,169	\$227,960
Bristol.....	38,000	17,700	7	8	6,638	44,295	49,613	71,052
Greenwich.....	198,000	70,000	13	8	21,900	163,100	238,925	252,200
Hartford.....	37,500	46,700	8	9	30,560	308,445	126,776	458,824
Meriden.....	7,750	18,700	2	4	13,364	5,115	37,643	34,144
New Britain.....	26,000	16,000	2	2	2,300	267,924	40,262	301,411
New Haven.....	146,000	65,700	26	12	35,100	132,325	221,890	261,860
Norwalk.....	102,450	93,400	15	18	5,128	14,475	179,313	118,100
Stamford.....	57,000	90,500	10	17	7,350	28,350	75,500	155,475
Torrington.....	13,000	23,000	5	6	3,360	6,055	38,531	32,965
Waterbury.....	64,500	23,200	15	6	42,200	13,650	124,300	49,400
Maine:								
Bangor.....	19,300	33,600	6	11	1,550	7,275	21,600	51,775
Lewiston.....	13,000	9,000	2	2	12,800	1,300	46,800	14,300
Portland.....	55,100	32,500	13	8	34,800	18,005	117,872	66,262
Massachusetts:								
Beverly.....	28,000	30,000	5	6	4,225	4,635	37,725	41,985
Boston <sup>1</sup> .....	1,069,220	555,100	249	132	1,254,500	2,386,180	2,671,346	3,683,755
Brockton.....	50,700	31,000	7	7	34,325	20,525	103,025	65,410
Brookline.....	73,300	157,500	7	10	13,200	64,260	97,885	229,260
Cambridge.....	134,400	110,000	29	2	8,310	251,650	182,950	447,035
Chelsea.....	0	4,000	0	1	100	0	5,890	21,365
Chicopee.....	14,700	15,500	5	5	201,925	3,650	230,525	26,150
Everett.....	34,500	12,400	10	4	169,326	44,650	209,126	70,450
Fall River.....	2,400	0	1	0	12,160	11,300	23,250	34,250
Fitchburg.....	0	7,250	0	2	6,250	5,400	28,325	16,390
Haverhill.....	1,600	2,900	1	2	2,970	3,085	11,735	12,165
Holyoke.....	19,500	40,000	3	6	26,550	186,350	52,400	249,175
Lawrence.....	7,500	4,500	1	1	6,050	21,410	43,970	153,660
Lowell.....	12,350	39,200	6	6	15,185	8,800	65,790	56,615
Lynn.....	54,800	85,300	11	17	341,580	11,075	428,047	118,670
Malden.....	131,000	42,600	42	9	14,579	7,870	170,809	65,895
Medford.....	113,900	340,400	21	89	13,850	413,230	134,175	759,870
New Bedford.....	14,000	26,500	2	4	36,975	10,900	65,925	50,800
Newton.....	318,000	239,000	39	24	23,350	23,300	359,275	297,295
Pittsfield.....	51,900	90,850	9	18	17,375	30,875	82,790	142,240
Quincy.....	72,100	55,400	21	11	27,435	39,930	150,872	160,810
Revere.....	16,800	22,900	4	7	4,975	12,050	34,775	43,150
Salem.....	53,200	33,000	8	6	2,050	46,900	167,540	91,095
Somerville.....	29,000	10,500	8	3	92,950	23,170	149,929	50,005
Springfield.....	81,000	58,200	20	14	63,000	80,875	179,940	227,500
Waltham.....	64,800	59,200	14	8	20,075	5,700	112,225	69,925
Watertown.....	97,000	38,000	21	8	14,500	11,950	117,675	54,755
Worcester.....	194,400	180,000	33	25	31,570	27,855	292,590	242,050
New Hampshire:								
Concord.....	18,000	41,500	4	8	1,950	5,200	120,950	49,200
Manchester.....	24,600	44,350	10	15	6,345	6,245	62,607	97,633
Rhode Island:								
Cranston.....	82,100	116,100	17	24	36,200	12,175	122,700	137,340
East Providence.....	58,100	77,400	10	15	93,935	12,385	160,760	116,143
Newport.....	30,500	4,500	7	1	8,900	16,150	121,079	38,415
Pawtucket.....	38,550	75,800	8	14	14,230	13,140	67,550	108,820
Providence.....	228,700	159,400	34	27	255,875	96,285	716,900	463,563
Woonsocket.....	44,000	0	6	0	107,805	9,630	157,390	19,285
Total.....	4,117,420	3,542,050	816	688	3,285,449	4,946,899	9,233,639	10,607,852
Percent of change.....		-14.0		-15.7		+50.6		+14.9

<sup>1</sup> Applications filed.



TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

*Middle Atlantic States*

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
New Jersey:								
Atlantic City.....	\$7,848	\$24,000	5	3	\$1,378	\$2,000	\$72,093	\$71,319
Bayonne.....	0	16,000	0	6	34,112	8,850	37,812	31,100
Belleville.....	59,700	37,000	17	10	3,992	4,800	70,632	46,153
Bloomfield.....	40,000	146,000	7	31	38,000	6,000	107,000	154,000
Camden.....	32,000	0	15	0	487,441	35,500	561,126	51,920
Clifton.....	119,400	38,500	27	9	16,100	10,680	150,600	54,600
East Orange.....	34,750	19,700	8	3	286,170	94,980	370,662	129,838
Elizabeth.....	117,000	32,000	39	9	27,000	21,000	144,000	53,000
Garfield.....	18,000	8,200	7	2	1,000	2,100	27,225	12,750
Hoboken.....	0	0	0	0	1,500	227,410	15,595	242,074
Irvington.....	39,200	67,500	9	16	86,685	27,540	155,650	108,740
Jersey City.....	45,500	58,500	10	13	175,650	55,611	309,175	217,640
Kearny.....	18,000	48,000	6	14	7,755	353,645	31,165	404,910
Montclair.....	308,128	133,200	17	14	10,270	0	340,703	133,200
Newark.....	303,500	163,600	49	40	175,188	123,375	868,973	450,340
New Brunswick.....	30,500	21,533	4	2	1,650	6,500	54,174	40,440
Orange.....	0	0	0	0	0	0	35,282	122,001
Passaic.....	0	0	0	0	6,900	83,700	66,808	102,025
Paterson.....	47,725	20,800	10	6	35,665	40,220	141,015	133,170
Perth Amboy.....	17,000	39,000	4	8	3,800	2,675	27,975	55,275
Plainfield.....	46,150	92,400	7	9	12,525	9,625	69,929	166,020
Trenton.....	61,000	12,100	4	2	57,140	38,810	197,928	78,220
Union City.....	0	0	0	0	2,900	21,348	27,490	43,510
West New York.....	6,800	0	1	0	1,500	0	19,380	3,105
New York:								
Albany.....	197,500	185,490	27	19	112,120	176,600	439,817	394,150
Amsterdam.....	25,100	8,600	5	2	4,050	2,675	32,800	15,275
Auburn.....	9,000	0	2	0	584,410	3,005	598,450	10,265
Binghamton.....	58,300	11,300	12	2	16,010	7,971	114,508	55,311
Buffalo.....	675,600	361,300	187	118	355,784	492,450	1,118,268	968,106
Elmira.....	6,400	11,000	2	2	26,640	4,655	73,245	28,090
Jamestown.....	14,000	3,500	1	1	3,950	2,175	39,893	20,885
Kingston.....	22,000	38,000	5	6	7,600	2,950	46,157	71,750
Lockport.....	8,500	7,800	4	2	840	1,975	11,975	11,775
Mount Vernon.....	433,500	218,500	73	18	55,300	40,950	538,756	269,800
Newburgh.....	12,000	19,000	2	4	194,443	126,100	218,618	151,600
New Rochelle.....	173,200	596,500	10	89	32,230	14,710	544,519	980,628
New York City:								
The Bronx <sup>1</sup> .....	4,154,752	3,530,600	1,049	859	612,600	1,181,100	5,124,502	5,153,365
Brooklyn <sup>1</sup> .....	6,906,050	6,618,350	1,762	1,672	753,767	905,630	8,483,000	8,370,619
Manhattan <sup>1</sup> .....	1,350,000	870,000	306	179	27,203,845	10,090,880	31,561,843	12,032,365
Queens <sup>1</sup> .....	9,512,700	5,536,250	2,333	1,184	1,101,532	2,785,981	11,879,236	8,863,080
Richmond <sup>1</sup> .....	429,300	504,915	132	132	531,828	1,052,387	1,049,365	1,705,202
Niagara Falls.....	84,800	55,300	18	13	17,202	18,410	151,291	111,708
Poughkeepsie.....	70,000	48,500	5	7	2,220	243,750	84,570	318,150
Rochester.....	297,600	141,200	19	22	734,195	413,769	1,082,170	652,030
Schenectady.....	40,000	60,475	9	12	35,975	43,105	124,640	172,530
Syracuse.....	142,600	140,000	25	27	386,565	925,855	595,660	1,102,268
Troy.....	78,700	116,600	17	12	10,400	70,600	123,108	199,873
Utica.....	43,500	56,000	10	11	15,275	3,015	132,275	71,090
Watertown.....	9,300	2,000	3	1	3,200	1,880	23,420	27,101
White Plains.....	118,400	231,432	11	25	28,575	2,007,700	186,800	2,279,143
Yonkers.....	1,229,800	446,400	160	54	309,310	233,175	1,574,260	752,625
Pennsylvania:								
Allentown.....	65,800	26,000	10	1	12,950	13,950	91,875	58,925
Altoona.....	6,800	37,046	2	7	7,139	12,273	33,610	61,790
Bethlehem.....	28,500	68,700	4	9	7,050	16,775	40,800	118,575
Butler.....	0	600	0	1	7,050	3,200	15,725	6,600
Chester.....	2,000	0	1	0	2,125	5,850	15,225	17,350
Easton.....	26,500	0	1	0	1,317	4,959	34,162	9,779
Erie.....	92,600	116,250	19	21	23,000	244,679	186,472	451,011
Harrisburg.....	33,500	41,000	7	5	18,875	8,150	87,801	90,450
Hazleton.....	3,733	7,258	1	2	194,465	69,464	205,465	97,591

<sup>1</sup> Applications filed.

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

*Middle Atlantic States—Continued*

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
Pennsylvania—Con.								
Johnstown.....	\$1,600	\$20,500	1	4	\$5,925	\$6,210	\$21,745	\$32,390
Lancaster.....	15,600	7,000	5	2	43,370	28,400	82,210	104,525
McKeesport.....	20,000	61,300	5	14	8,960	3,673	67,239	96,691
Nanticoke.....	18,900	20,700	4	4	0	0	23,065	31,595
New Castle.....	22,600	20,300	5	4	14,580	5,770	40,795	35,320
Norristown.....	0	11,495	0	3	4,023	11,213	13,591	52,403
Philadelphia.....	477,750	338,575	97	68	6,795,195	1,204,870	7,628,125	1,903,240
Pittsburgh.....	398,500	251,200	70	61	2,106,060	450,595	2,709,158	1,005,160
Reading.....	28,000	47,000	3	4	77,330	1,614,506	187,033	1,702,051
Scranton.....	32,500	10,575	11	3	32,315	215,035	108,960	274,435
Wilkes-Barre.....	8,137	6,200	8	4	373,507	6,988	418,491	38,322
Wilkesburg.....	6,000	14,500	1	3	4,625	3,440	21,876	29,900
Williamsport.....	38,100	6,500	7	2	54,638	6,024	121,387	29,697
York.....	33,250	0	9	0	111,625	9,505	196,396	19,944
Total.....	28,815,173	21,909,744	6,706	4,892	44,520,260	25,975,351	82,206,684	53,961,799
Per cent of change.....		-24.0		-27.1		-41.7		-34.4

*East North Central States*

Illinois:								
Alton.....	\$16,000	\$24,873	5	3	\$750	\$5,800	\$30,264	\$42,648
Aurora.....	23,513	6,450	5	2	315,735	238,735	355,752	257,460
Belleville.....	42,500	29,400	18	9	0	3,050	42,500	34,900
Berwyn.....	50,800	23,000	9	3	4,969	7,299	57,269	36,359
Bloomington.....	16,000	37,000	4	5	155,700	71,000	176,700	109,000
Chicago.....	763,800	772,250	112	119	2,683,275	686,870	4,233,890	2,030,570
Cicero.....	7,000	17,500	1	3	2,170	650	20,185	26,662
Danville.....	16,900	8,600	6	2	0	850	23,303	14,900
Decatur.....	75,300	51,700	13	5	81,900	7,800	159,150	82,550
East St. Louis.....	84,220	25,934	26	13	10,100	83,390	99,605	130,224
Elgin.....	52,450	25,600	10	5	26,625	4,835	93,200	41,542
Evanston.....	61,000	61,000	4	5	339,250	4,500	625,750	148,000
Granite City.....	4,000	2,600	1	1	200	6,900	4,200	9,500
Joliet.....	46,000	33,500	7	3	2,200	800	71,800	44,300
Maywood.....	5,000	17,200	1	3	3,548	5,179	10,848	26,979
Moline.....	20,800	17,500	5	4	5,660	1,604	45,749	22,111
Oak Park.....	90,900	86,000	7	8	13,950	21,460	110,800	125,950
Peoria.....	123,700	121,950	31	26	11,942	26,300	154,927	334,250
Quincy.....	12,800	10,750	4	5	1,318	1,050	16,043	19,525
Rockford.....	58,900	25,500	18	7	8,955	8,625	86,415	43,995
Rock Island.....	22,000	17,500	5	6	4,565	2,436	59,904	44,228
Springfield.....	37,200	60,300	9	13	81,250	10,915	144,844	110,212
Waukegan.....	29,000	23,000	4	6	6,012	940	49,632	38,640
Indiana:								
Anderson.....	32,025	15,700	10	5	15,050	575	61,565	39,666
East Chicago.....	0	0	0	0	7,742	49,568	18,119	55,568
Elkhart.....	2,800	4,000	1	1	17,931	1,125	32,587	19,555
Evansville.....	65,150	28,575	17	8	304,603	15,807	380,569	58,415
Fort Wayne.....	105,371	84,230	21	19	518,835	15,539	670,690	138,743
Gary.....	29,000	27,300	6	10	4,235	3,460	54,120	63,020
Hammond.....	17,600	32,250	5	6	19,478	3,135	43,203	57,317
Indianapolis.....	271,850	124,100	38	24	213,086	504,929	589,583	706,038
Kokomo.....	3,000	0	1	0	2,500	1,600	12,981	9,111
Lafayette.....	18,600	3,600	6	1	5,000	0	24,600	6,450
Marion.....	800	0	1	0	750	595	12,085	3,390
Michigan City.....	2,700	800	2	1	3,875	15,995	9,375	18,025
Mishawaka.....	6,500	700	3	1	5,955	1,615	16,405	6,865
Muncie.....	8,900	6,900	4	4	2,215	6,930	26,954	22,596
Richmond.....	11,800	17,500	4	4	800	450	18,200	32,350
South Bend.....	17,950	45,150	6	8	54,410	37,415	92,085	102,770
Terre Haute.....	0	9,700	0	4	1,420	4,505	11,982	21,790

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

## East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
Michigan:								
Ann Arbor.....	\$76,950	\$84,700	7	13	\$1,408,485	\$2,481	\$1,510,244	\$108,384
Battle Creek.....	14,650	6,250	5	2	267,500	16,000	294,520	27,300
Bay City.....	28,500	20,900	10	6	9,635	6,060	363,696	70,848
Dearborn.....	124,400	102,800	27	21	96,090	11,085	226,311	122,320
Detroit.....	1,593,675	1,452,150	340	303	775,570	587,428	2,709,488	2,366,894
Flint.....	99,789	87,344	16	19	231,209	48,789	374,583	168,418
Grand Rapids.....	55,750	46,000	14	13	25,210	32,500	133,770	111,875
Hamtramck.....	0	0	0	0	1,150	400	9,935	7,630
Highland Park.....	0	0	0	0	4,365	1,700	10,190	17,450
Jackson.....	26,400	4,800	2	1	11,128	5,815	47,611	25,552
Kalamazoo.....	29,600	28,700	8	5	13,340	60,205	60,043	101,665
Lansing.....	46,325	26,250	8	8	41,210	533,405	141,175	564,960
Muskegon.....	18,900	10,500	6	4	2,975	251,880	35,940	268,985
Pontiac.....	0	2,400	0	1	30,100	8,360	37,614	21,105
Port Huron.....	2,800	1,225	2	2	7,875	0	15,850	1,225
Saginaw.....	31,800	27,200	12	9	19,504	38,692	66,121	82,299
Wyandotte.....	22,750	31,250	5	5	2,340	6,545	37,185	46,265
Ohio:								
Akron.....	67,625	43,650	12	8	25,336	77,625	357,433	218,350
Ashtabula.....	0	5,000	0	1	46,760	4,955	51,662	12,835
Canton.....	27,550	16,700	4	5	38,010	110,015	101,450	136,035
Cincinnati.....	894,855	727,940	134	128	371,205	6,191,385	1,386,700	7,051,270
Cleveland.....	338,500	255,000	59	48	198,325	290,450	792,500	823,725
Cleveland Heights.....	95,675	128,000	17	28	24,485	3,155	124,810	142,608
Columbus.....	235,100	280,400	41	47	96,100	77,900	425,650	393,550
Dayton.....	73,400	149,700	21	37	36,404	1,032,840	163,982	1,223,902
East Cleveland.....	5,000	0	1	0	10,675	687,097	21,470	688,011
Elyria.....	1,800	0	2	0	960	3,580	7,640	8,615
Hamilton.....	15,400	3,000	5	1	4,610	201,665	28,540	213,425
Lakewood.....	91,000	129,500	17	30	17,750	3,240	114,450	137,740
Lima.....	3,000	0	1	0	515	1,805	9,890	6,265
Lorain.....	6,700	3,800	2	2	19,230	12,000	29,760	22,135
Mansfield.....	71,100	77,100	13	14	2,505	15,310	78,068	102,958
Marion.....	0	0	0	0	3,150	655	3,915	1,065
Massillon.....	4,560	0	1	0	93,295	1,050	100,105	4,400
Middletown.....	1,000	0	1	0	1,658	1,550	9,558	10,665
Norwood.....	10,500	33,000	2	6	3,180	2,150	15,320	37,700
Portsmouth.....	0	0	0	0	6,425	5,800	9,390	9,000
Springfield.....	26,750	22,500	8	4	830,859	7,605	863,329	48,920
Steubenville.....	10,500	16,000	4	4	1,050	1,325	12,000	25,675
Toledo.....	129,900	108,600	26	26	29,179	177,943	204,507	328,892
Warren.....	47,570	23,180	9	6	9,755	2,320	66,405	35,210
Youngstown.....	41,800	59,850	9	10	7,460	162,944	174,447	239,109
Wisconsin:								
Appleton.....	27,800	68,200	7	11	12,315	93,572	61,505	193,417
Eau Claire.....	30,400	15,527	12	9	7,400	13,400	40,968	44,797
Fond du Lac.....	28,400	14,100	9	3	2,930	142,011	49,260	158,346
Green Bay.....	43,050	68,800	16	18	14,670	2,555	82,975	87,940
Kenosha.....	43,200	5,200	5	1	7,455	5,425	66,650	19,917
Madison.....	62,050	50,000	12	10	35,560	17,224	120,564	88,654
Milwaukee.....	690,970	289,780	136	59	1,448,687	487,285	2,960,772	1,010,258
Oshkosh.....	9,800	24,140	6	4	33,825	13,371	50,905	46,271
Racine.....	63,000	0	11	0	93,070	61,855	171,860	86,045
Sheboygan.....	90,700	20,300	19	4	9,809	11,805	131,993	52,323
Superior.....	4,000	11,500	1	3	3,155	83,065	11,680	101,976
West Allis.....	35,100	71,700	9	24	6,545	9,870	49,930	92,955
Total.....	7,753,873	6,551,248	1,524	1,315	11,428,472	13,493,378	23,757,677	23,151,935
Per cent of change.....		-15.5		-13.7		+18.1		-2.5



TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

*West North Central States*

State and city	New residential buildings				New nonresidential buildings (estimated)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
Iowa:								
Burlington.....	\$6,000	\$5,700	2	4	\$4,145	\$1,400	\$12,695	\$10,425
Cedar Rapids.....	54,800	39,770	20	15	72,657	24,923	149,497	97,586
Council Bluffs.....	29,000	12,000	7	6	17,200	102,150	59,700	117,450
Davenport.....	64,200	46,920	20	13	9,848	3,377	109,997	72,814
Des Moines.....	143,350	80,470	27	20	902,985	63,457	1,087,000	155,092
Dubuque.....	6,000	14,517	2	4	24,503	16,624	42,195	42,003
Ottumwa.....	31,500	50,000	7	10	2,050	105,200	41,300	260,150
Sioux City.....	79,950	67,600	25	17	109,125	29,005	253,375	120,655
Waterloo.....	41,625	49,400	18	15	20,800	14,468	76,725	68,743
Kansas:								
Hutchinson.....	25,750	18,700	10	5	3,338	4,605	38,949	28,555
Kansas City.....	32,725	33,000	16	15	221,220	18,605	263,245	62,300
Topeka.....	21,500	61,600	6	11	70,720	27,770	107,495	98,000
Wichita.....	74,725	126,625	32	37	18,375	19,404	124,446	168,357
Minnesota:								
Duluth.....	13,000	49,550	5	13	21,565	13,190	96,363	99,333
Minneapolis.....	668,700	491,975	181	118	868,365	355,025	1,707,855	1,009,184
St. Paul.....	516,960	273,300	53	47	879,595	1,857,331	1,512,455	2,233,483
Missouri:								
Joplin.....	14,000	0	4	0	247,303	1,650	270,028	5,100
Kansas City.....	150,500	153,000	38	40	811,000	2,826,880	1,002,350	3,302,150
Springfield.....	3,800	37,000	13	14	18,075	2,650	30,350	50,250
St. Joseph.....	16,000	9,850	7	4	20,980	152,025	48,835	168,830
St. Louis.....	577,937	648,250	146	174	3,805,257	536,885	4,568,665	1,401,748
Nebraska:								
Lincoln.....	83,450	39,400	10	10	4,995	14,720	98,955	85,555
Omaha.....	154,150	123,600	36	26	40,617	131,910	226,947	320,130
South Dakota:								
Sioux Falls.....	124,565	178,513	28	45	289,384	15,487	426,574	197,250
Total.....	2,934,187	2,610,740	713	663	8,484,102	6,338,741	12,355,996	10,175,144
Per cent of change.....		-11.0		-7.0		-25.3		-17.7

*South Atlantic States*

Delaware:								
Wilmington.....	\$69,100	\$310,900	14	61	\$15,185	\$15,982	\$131,567	\$368,472
District of Columbia:								
Washington.....	1,630,100	4,265,000	308	677	283,425	843,673	2,363,185	5,362,738
Florida:								
Jacksonville.....	49,850	28,250	16	14	10,985	14,420	121,725	109,955
Miami.....	116,750	33,050	15	15	32,470	49,800	239,038	207,765
Orlando.....	0	1,800	0	3	1,670	425	18,370	18,450
St. Petersburg.....	26,700	31,400	11	4	27,000	5,200	76,300	71,700
Tampa.....	7,450	500	8	1	35,725	50,475	69,621	84,511
Georgia:								
Atlanta.....	90,825	72,600	41	31	76,183	186,203	234,012	334,780
Augusta.....	9,858	28,250	6	11	9,638	6,698	43,745	42,148
Columbus.....	6,450	10,950	2	5	9,225	1,640	25,345	19,955
Macon.....	7,475	19,400	11	4	8,335	100	221,080	52,509
Savannah.....	8,750	16,000	3	6	18,275	1,215	36,550	58,515
Maryland:								
Baltimore.....	3,430,000	812,000	827	173	831,200	1,252,200	4,891,200	2,739,300
Cumberland.....	5,400	4,000	3	1	2,930	1,555	8,580	6,830
Hagerstown.....	9,500	3,500	2	1	6,920	50,565	16,620	55,315
North Carolina:								
Asheville.....	8,500	1,000	5	1	17,661	165	29,586	38,012
Charlotte.....	133,000	0	42	0	33,525	11,500	176,971	142,706
Greensboro.....	7,800	33,000	2	6	19,480	10,278	55,535	100,017
High Point.....	37,200	8,500	8	4	8,625	10,015	47,236	19,940
Raleigh.....	1,500	1,400	1	3	22,300	1,805	25,475	14,907
Wilmington.....	7,000	0	3	0	2,400	1,800	15,400	17,100
Winston-Salem.....	14,200	13,815	3	9	24,410	175,290	72,452	228,000

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

*South Atlantic States—Continued*

State and city	New residential buildings				New nonresidential buildings (estimated)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
South Carolina:								
Charleston.....	\$9,400	\$21,000	4	6	\$450	\$100	\$19,890	\$28,400
Columbia.....	41,600	28,000	14	16	2,450	10,835	54,090	58,085
Greenville.....	22,000	20,200	3	5	13,975	34,625	42,410	61,585
Virginia:								
Newport News....	65,387	8,400	13	4	17,692	1,838	93,808	20,476
Norfolk.....	75,500	104,800	19	21	18,115	24,795	118,555	160,645
Petersburg.....	1,000	7,000	2	3	865	7,000	4,890	19,930
Portsmouth.....	15,400	9,545	5	2	1,070	790	58,932	24,366
Richmond.....	122,550	85,400	24	24	160,150	44,243	307,882	168,080
Roanoke.....	258,000	197,100	2	8	5,725	74,495	275,974	277,945
West Virginia:								
Charleston.....	57,500	26,500	11	10	108,850	3,275	173,550	196,675
Clarksburg.....	3,600	23,000	2	2	2,415	1,060	13,365	30,325
Huntington.....	5,100	11,900	2	5	1,325	6,870	16,725	23,330
Parkersburg.....	4,000	11,600	1	3	8,875	64,029	30,938	82,239
Wheeling.....	14,000	13,000	2	3	17,235	43,411	58,109	74,811
Total.....	6,314,945	6,262,760	1,424	1,142	1,747,909	3,008,370	10,015,161	11,321,401
Per cent of change.....		-0.8		-19.8		+72.1		+13.0

*South Central States*

Alabama:								
Birmingham.....	\$4,100	\$45,195	5	11	\$284,136	\$203,647	\$382,518	\$296,967
Mobile.....	21,600	11,400	12	6	11,550	16,200	55,154	40,060
Montgomery.....	44,000	58,600	16	26	7,625	9,750	71,265	83,780
Arkansas:								
Little Rock.....	20,800	35,250	8	9	36,470	17,865	116,465	69,627
Kentucky:								
Ashland.....	0	0	0	0	450	1,400	6,225	4,025
Covington.....	5,000	8,000	1	2	4,660	166,345	21,745	186,840
Louisville.....	144,000	103,500	21	15	300,505	24,350	534,395	161,495
Newport.....	0	8,200	0	2	25,300	1,050	26,600	13,250
Paducah.....	3,200	9,150	2	4	1,550	6,255	5,750	16,080
Louisiana:								
Baton Rouge.....	6,200	20,211	5	9	82,325	6,947	92,035	40,681
Monroe.....	9,050	11,500	6	4	75	1,600	9,375	17,800
New Orleans.....	93,486	60,900	37	26	2,224,546	54,200	2,375,019	192,973
Shreveport.....	50,614	22,000	21	15	5,048	3,877	82,741	66,666
Oklahoma:								
Enid.....	9,550	16,000	6	16	1,350	0	12,830	16,000
Oklahoma City....	543,750	233,700	77	68	1,123,910	126,416	1,708,545	404,516
Okmulgee.....	0	0	0	0	150	646	650	1,046
Tulsa.....	208,705	79,875	56	27	63,305	276,310	297,717	377,486
Tennessee:								
Chattanooga.....	41,709	51,050	14	16	21,500	51,725	89,864	159,002
Knoxville.....	25,440	19,620	11	9	33,036	14,544	72,006	39,312
Memphis.....	92,950	74,230	32	33	52,910	159,250	221,000	355,220
Nashville.....	58,850	43,300	20	20	421,265	45,525	512,061	123,196
Texas:								
Amarillo.....	23,965	64,300	14	19	370,500	225,600	401,525	293,375
Austin.....	142,197	128,150	70	83	75,126	10,095	232,369	154,430
Beaumont.....	20,225	40,720	11	15	68,562	282,085	109,169	345,571
Dallas.....	188,195	156,190	85	74	146,590	100,215	527,045	337,382
El Paso.....	117,405	59,258	31	14	25,895	2,265	182,181	96,942
Fort Worth.....	163,350	168,104	52	39	202,685	716,618	415,384	938,236
Houston.....	1,168,750	554,200	284	130	191,850	149,950	1,333,650	733,593
San Angelo.....	10,800	3,250	8	3	9,525	250	24,525	5,925
San Antonio.....	87,485	68,725	59	49	415,520	17,780	544,614	107,145
Waco.....	33,667	18,087	10	8	3,733	27,200	63,007	80,907
Wichita Falls.....	0	0	0	0	1,500	0	6,875	6,774
Total.....	3,339,043	2,172,665	974	752	6,213,852	2,720,000	10,594,384	5,766,611
Per cent of change.....		-34.9		-22.8		-56.2		-45.6

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1931—Continued

*Mountain and Pacific States*

State and city	New residential buildings				New nonresidential buildings (estimated)		Total construction, including alterations (estimated cost)	
	Estimated cost		Families provided for in new dwellings		April, 1931	May, 1931	April, 1931	May, 1931
	April, 1931	May, 1931	April, 1931	May, 1931				
Arizona:								
Phoenix.....	\$48,690	\$44,805	11	15	\$9,600	\$48,360	\$76,577	\$114,705
Tucson.....	62,300	55,550	20	20	15,349	50,670	115,380	127,322
California:								
Alameda.....	29,800	26,400	7	5	2,110	17,530	43,684	50,382
Alhambra.....	82,750	75,850	27	25	21,700	3,900	110,750	84,875
Bakersfield.....	41,205	37,900	15	9	28,850	2,175	87,015	59,555
Berkeley.....	135,625	163,000	25	49	11,155	23,697	160,472	209,451
Fresno.....	70,850	51,150	17	12	11,705	5,345	105,093	75,442
Glendale.....	264,750	183,800	69	39	12,065	26,385	283,545	219,885
Long Beach.....	296,850	236,200	105	91	35,350	155,280	366,745	431,245
Los Angeles.....	1,700,864	1,869,901	548	635	912,906	660,175	3,509,653	3,323,487
Oakland.....	257,320	197,971	64	56	604,087	693,118	933,852	969,411
Pasadena.....	71,300	130,450	14	13	77,595	77,072	199,389	307,335
Sacramento.....	176,920	190,910	32	37	313,863	331,460	532,756	574,952
San Bernardino.....	58,500	45,200	16	11	22,690	2,690	93,687	56,750
San Diego.....	217,700	234,155	56	80	287,886	415,432	551,516	684,662
San Francisco.....	1,212,400	1,046,716	323	300	566,384	1,752,485	1,998,787	2,949,345
San Jose.....	60,300	32,300	13	8	23,155	3,010	135,645	61,485
Santa Ana.....	44,400	6,500	12	2	0	12,995	51,601	31,459
Santa Monica.....	131,200	90,550	31	17	29,710	46,460	170,285	148,120
Stockton.....	69,600	108,994	16	28	21,090	165,470	103,388	285,699
Vallejo.....	23,300	10,800	5	2	8,006	2,200	42,475	17,675
Colorado:								
Colorado Springs.....	10,450	6,700	5	3	21,005	6,920	44,580	17,670
Denver.....	828,400	384,150	289	96	204,450	381,900	1,120,450	888,100
Pueblo.....	11,500	22,000	6	10	6,680	25,387	28,650	64,040
Montana:								
Butte.....	0	450	0	1	9,175	17,896	14,200	24,956
Great Falls.....	103,700	34,200	17	8	20,320	10,570	135,895	53,145
New Mexico:								
Albuquerque.....	87,800	55,500	20	17	5,804	54,275	121,302	115,169
Oregon:								
Portland.....	286,550	273,650	59	58	127,765	68,290	527,290	439,985
Salem.....	31,365	14,900	19	3	86,500	1,625	129,129	23,391
Utah:								
Ogden.....	9,000	10,300	4	5	3,500	53,150	14,700	74,680
Salt Lake City.....	224,350	274,240	58	95	46,214	64,786	298,163	365,846
Washington:								
Bellingham.....	9,900	14,800	3	5	3,000	1,385	17,857	20,965
Everett.....	3,000	7,600	1	4	8,670	1,405	18,216	17,560
Seattle.....	296,320	361,000	106	113	424,699	1,705,935	994,549	2,266,790
Spokane.....	104,400	93,975	24	27	418,175	3,725	542,019	132,735
Tacoma.....	32,000	46,500	14	20	115,550	58,445	193,915	125,510
Total.....	7,095,359	6,439,067	2,051	1,919	4,516,763	6,957,603	13,873,210	15,413,784
Per cent of change.....		-9.2		-6.4		+54.0		+11.1

*Hawaii*

Honolulu.....	\$170,822	\$146,543	57	96	\$255,861	\$45,597	\$454,743	\$218,818
Per cent of change.....		-14.2		+68.4		-82.2		-51.9



# WAGES AND HOURS OF LABOR

## Recent Changes in Wages and Hours of Labor

**I**NFORMATION received by the bureau regarding wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments that report monthly figures regarding volume of employment, while part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made, it is not always possible to avoid duplication of data as between parts 1 and 2.

### Part 1. Wage-Rate Changes in Manufacturing Industries

Seven establishments in 6 industries reported wage-rate increases during the month ending May 15. These increases, averaging 3 per cent, affected 743 employees or 49 per cent of all employees in the establishments concerned.

Two hundred and ninety-three establishments in 46 industries reported wage-rate decreases during the same period. These decreases, averaging 10.4 per cent, affected 46,377 employees or 73 per cent of all employees in the establishments concerned.

Thirty-three of the wage-rate decreases were reported by establishments in the textile group of industries; 53 of the decreases were in the iron and steel group of industries; 60 decreases were in the lumber group of industries; 56 decreases were in the stone-clay-glass group of industries.

## WAGE CHANGES OCCURRING BETWEEN APRIL 15 AND MAY 15, 1931

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Baking.....	716	1	5.0	5.0	17	24	(1)
Hosiery and knit goods.....	350	1	1.0	1.0	90	100	(1)
Iron and steel.....	189	1	1.5	1.5	497	44	(1)
Printing, book and job.....	610	2	10.0-14.0	13.3	28	74	(1)
Printing, newspapers.....	454	1	2.3	2.3	21	30	(1)
Brick, tile, and terra cotta.....	731	1	10.0	10.0	90	92	(1)
Total.....		7	1.0-14.0	3.0	743	49	
			Decreases				
Slaughtering and meat packing.....	211	4	5.0-20.0	9.5	305	31	(1)
Ice cream.....	331	1	10.0	10.0	46	100	(1)
Flour.....	403	6	10.0-12.5	11.0	213	68	1
Baking.....	716	3	9.2-25.0	11.4	32	86	(1)
Cotton goods.....	505	18	7.0-15.0	11.8	1,472	28	1
Hosiery and knit goods.....	350	5	4.3-15.0	9.9	521	11	1
Silk goods.....	258	3	2.5-10.0	9.4	264	95	(1)
Woolen and worsted goods.....	195	2	10.0-12.5	11.9	302	100	1
Clothing, men's.....	350	1	5.0	5.0	181	100	(1)
Clothing, women's.....	382	2	10.0	10.0	234	76	1
Millinery and lace goods.....	124	2	10.0	10.0	247	89	2
Iron and steel.....	189	4	6.0-10.0	9.3	1,102	99	(1)
Structural ironwork.....	178	10	2.0-10.0	9.7	1,596	84	7
Foundry and machines-hop products.....	1,077	26	5.0-25.0	11.4	2,932	79	2
Hardware.....	96	4	10.0	10.0	1,131	92	4
Machine tools.....	151	3	10.0	10.0	546	62	2
Steam fittings and steam and hot-water heating apparatus.....	105	1	5.0	5.0	91	50	(1)
Stoves.....	136	5	10.0-12.5	10.3	570	71	3
Lumber, sawmills.....	684	39	5.0-25.0	11.6	6,243	90	7
Lumber, millwork.....	343	12	2.0-20.0	8.0	309	77	1
Furniture.....	447	9	5.0-20.0	12.2	909	65	2
Boots and shoes.....	301	2	10.0	10.0	61	25	(1)
Paper and pulp.....	361	18	3.5-15.0	9.9	5,201	98	7
Paper boxes.....	312	7	10.0-20.0	10.5	612	95	3
Printing, book and job.....	610	4	7.5-10.0	9.0	458	100	1
Chemicals.....	163	3	10.0-15.0	10.0	275	17	1
Fertilizers.....	207	3	10.0-20.0	13.5	162	84	2
Petroleum refining.....	96	2	9.0-10.0	9.9	190	20	(1)
Cement.....	111	8	10.0	10.0	1,176	100	6
Brick, tile, and terra cotta.....	731	45	10.0-20.0	11.6	2,138	76	7
Pottery.....	115	2	10.0-20.0	11.6	127	54	1
Glass.....	191	1	15.0	15.0	202	100	(1)
Stamped and enameled ware.....	82	3	5.0-10.0	8.5	574	100	3
Brass, bronze, and copper products.....	162	5	5.0-14.0	8.3	203	52	1
Cigars and cigarettes.....	186	3	3.4-16.7	4.9	247	88	1
Automobiles.....	213	1	3.0	3.0	125	18	(1)
Electrical machinery, apparatus, and supplies.....	208	3	10.0	10.0	1,053	68	1
Pianos and organs.....	63	2	10.0-15.0	11.7	46	85	1
Rubber boots and shoes.....	10	1	10.0	10.0	467	65	4
Jewelry.....	157	1	10.0	10.0	149	100	1
Paint and varnish.....	304	8	10.0-15.0	10.2	442	100	3
Rubber goods, other than boots, shoes, tires, and inner tubes.....	80	2	5.0-10.0	7.6	234	100	1
Beet sugar.....	61	6	4.0	4.0	195	58	8
Cash registers, adding machines, and calculating machines.....	49	1	15.0	15.0	116	100	1
Typewriters and supplies.....	17	1	10.0	10.0	397	100	4
Industry not specified <sup>2</sup> .....		1	10.0	10.0	12,281	100	
Total.....		293	2.0-25.0	10.4	46,377	73	

<sup>1</sup> Less than one-half of 1 per cent.<sup>2</sup> Industry title omitted to avoid identifying reporting company.

## Part 2. Wage Changes Reported by Trade-Unions since March, 1931

WAGE and hour changes reported from trade-unions and other sources since March cover a total of 30,798 workers, of whom 9,428 adopted the 5-day week, about 1,500 of these having gone on this basis only temporarily.

Practically all changes in wages were reductions, the most important being in the building trades, where 9,000 workers accepted reductions ranging from 5 to 25 cents per hour, the next most significant group being the potters, where about 7,000 pieceworkers took a reduction of 10 per cent.

Only one of the groups—chauffeurs and teamsters—remained unchanged regarding wages.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, MARCH TO JUNE, 1931

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
		<i>Per week</i>	<i>Per week</i>		
Bakery trades, Youngstown, Ohio:					
Bakers.....	May 1	\$38.00-\$41.00	\$35.00-\$38.00	48	48
Foremen.....	do.	48.00	45.00	48	48
Building trades:					
Bricklayers and masons—		<i>Per hour</i>	<i>Per hour</i>		
Boston, Mass.....	Apr. 1	\$1.50	\$1.50	44	40
Columbus, Ohio, and vicinity.....	do.	1.56¼	1.56¼	44	40
Sandusky, Ohio.....	May 11	1.50	1.25	40	40
Toledo, Ohio, and vicinity.....	May 1	1.62½	1.50	44	40
Westerly, R. I.....	May 20	1.50	1.37½	44	44
Carpenters—					
Carbondale, Pa.....	May 1	1.00	1.00	44	40
Louisville, Ky., and vicinity.....	(1)	1.12½	1.00	40	40
Walla Walla, Wash.....	May 1	1.00	.87½	44	44
Youngstown, Ohio.....	do.	1.37½	1.25	40	40
Laborers, Santa Barbara, Calif., and vicinity.....	do.	(1)	(1)	44	40
Painters, decorators, and paper hangers—					
Baltimore, Md.....	June 26	1.12½	1.18¾	40	40
La Crosse, Wis.....	May 1	1.00	1.00	44	40
Omaha, Nebr.....	Apr. 15	1.00	1.00	44	40
Plasterers, Toledo, Ohio.....	May 1	1.62½	1.50	44	40
Plumbers—					
Bishop, Corpus Christi, Kingsville, and Robstown, Tex.....	(1)	1.37½	1.50	44	40
Cedar Rapids, Iowa.....	May 12	1.25	1.20	44	44
Youngstown, Ohio.....	May 1	1.50	1.37½	40	40
Sheet-metal workers, Indianapolis, Ind.....	do.	1.27½	1.15	44	44
Structural-iron workers, Santa Barbara, Calif., and vicinity.....	do.	(1)	(1)	44	40
All building trades workers, Dayton, Ohio.....	May 28	(1)	(1)	44	40
Chauffeurs and teamsters:		<i>Per week</i>	<i>Per week</i>		
Chauffeurs, Chicago, Ill.....	Apr. 1	\$42.00-\$46.00	\$42.00-\$46.00	60	57
Drivers, Chicago, Ill.....	do.	38.00-43.00	38.00-43.00	60	57
Taxicab drivers, San Francisco, Calif.....	May 1	4.00	4.00	60	60
Truck drivers and helpers, Oakland, Calif.....	Apr. 2	\$5.50-\$8.00	\$5.50-\$8.00	68½	68
Clothing:					
Coat and pants operators, Cincinnati, Ohio.....	Apr. 7	(1)	(1)	27½	31
Overall workers—					
Denison, Tex., Denver, Colo., Kansas City, Mo., Long Beach, Calif., Oakland, Calif., Omaha, Nebr., St. Paul, Minn., and Tacoma, Wash.....	June 1	(1)	(1)	44	40

<sup>1</sup> Not reported.

<sup>2</sup> Temporary change.

<sup>3</sup> And 25 per cent on weekly receipts exceeding \$84, night work, and \$62 day work

<sup>4</sup> And 25 per cent on weekly receipts exceeding \$62, night work, and \$58 day work

<sup>5</sup> Sliding scale.

<sup>6</sup> Per day.

<sup>7</sup> 3.3 per cent reduction.

<sup>8</sup> Average.



## RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, MARCH TO JUNE, 1931—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
		<i>Per week</i>	<i>Per week</i>		
Clothing—Continued.					
Shirt and overall makers, Indianapolis, Ind., and Lynchburg, Va.-----	June 1	( <sup>1</sup> )	( <sup>1</sup> )	44	40
Lumber workers: Everett, Wash.-----	Apr. 2	<sup>8</sup> Per hour \$0.453	<sup>8</sup> Per hour \$0.412	48	48
Molders and coremakers, Belleville, Ill.-----	Mar. 1	<sup>8</sup> Per day \$7.75 <sup>8</sup> Per hour	<sup>8</sup> Per day \$7.25 <sup>8</sup> Per hour	48	48
Mine laborers, Avella, Pa.-----	Apr. 16	\$0.40	\$0.35	( <sup>1</sup> )	( <sup>1</sup> )
Potters, United States-----	May 25	( <sup>9</sup> )	( <sup>10</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Printing trades:					
Compositors, Big Spring, Tex.—		<i>Per week</i>	<i>Per week</i>		
Newspaper, day-----	Mar. 9	\$41.00	\$40.00	48	48
Newspaper, night-----	do.	44.00	42.00	48	48
Railway clerks, Baltimore, Md.-----	Apr. 4	( <sup>1</sup> )	( <sup>1</sup> )	48	<sup>2</sup> 40
Textiles:					
Silk weavers—					
Central Falls, R. I.-----	Apr. 21	<sup>11</sup> \$2.35	<sup>11</sup> \$2.15	53 <sup>3</sup> / <sub>4</sub>	52 <sup>1</sup> / <sub>2</sub>
Clifton, N. J.-----	Apr. 27	\$30.00	\$35.00	48	48
Fall River, Mass.-----	May 15	<sup>12</sup> .04 <sup>1</sup> / <sub>2</sub>	<sup>12</sup> .03 <sup>3</sup> / <sub>4</sub>	58	58
Other occupations:					
Janitors, Chicago, Ill.—			<i>Per month</i> <sup>13</sup>		
Average rental \$60 per month—			<sup>14</sup> \$12.00	( <sup>1</sup> )	( <sup>1</sup> )
2-flat building-----	Apr. 1	( <sup>1</sup> )		( <sup>1</sup> )	( <sup>1</sup> )
3-flat building-----	do.	( <sup>1</sup> )	<sup>14</sup> 16.50	( <sup>1</sup> )	( <sup>1</sup> )
4-flat building-----	do.	( <sup>1</sup> )	<sup>14</sup> 19.00	( <sup>1</sup> )	( <sup>1</sup> )
5-flat building-----	do.	( <sup>1</sup> )	<sup>14</sup> 21.50	( <sup>1</sup> )	( <sup>1</sup> )
Average rental up to \$35 per month, 6 flats or over-----	do.	( <sup>1</sup> )	<sup>15</sup> 3.60	( <sup>1</sup> )	( <sup>1</sup> )
Average rental \$36 to \$59 per month, 6 flats or over-----	do.	( <sup>1</sup> )	<sup>15</sup> 3.75	( <sup>1</sup> )	( <sup>1</sup> )
Average rental \$60 per month, 6 flats or over-----	do.	( <sup>1</sup> )	<sup>15</sup> 3.80	( <sup>1</sup> )	( <sup>1</sup> )
Average rental \$121 to \$150 per month, 6 flats or over-----	do.	( <sup>1</sup> )	<sup>16</sup> 7.60	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Not reported.<sup>2</sup> Temporary change.<sup>3</sup> Average.<sup>4</sup> Piecework.<sup>5</sup> 10 per cent reduction.<sup>6</sup> Per 1,000 picks.<sup>7</sup> Per yard.<sup>8</sup> The rates following are about 5 per cent lower than former rates.<sup>9</sup> Or a proportionate amount for flats renting for over \$60 and up to \$200 per month.<sup>10</sup> Per flat.<sup>11</sup> Minimum pay per flat.

## Wages in the Textile Industry of Certain European Countries

THIS article presents the latest available data regarding wages and hours in various branches of the textile industry in Czechoslovakia, France, Germany, Italy, and the United Kingdom. The information was supplied by the American consuls in the respective countries.

It is seen that the normal working hours are uniformly 8 per day and 48 hours per week; in some cases, however, the factories are not working full time.

Wage rates vary widely from country to country.

Czechoslovakia <sup>1</sup>

IN THE Czechoslovak textile industry the wage rates are determined by collective agreement between the employers' associations and the respective trade-unions.

Table 1, which follows, shows the average hourly rates in the silk, velvet, and velveteen industry as contained in the agreement in force between the Association of Silk Industries in Czechoslovakia and six central labor unions.

TABLE 1.—AVERAGE HOURLY RATES IN SILK, VELVET, AND VELVETEEN INDUSTRY IN CZECHOSLOVAKIA

[Conversions into United States currency on basis of Czechoslovak crown=2.96 cents]

Occupation	Average hourly rate			
	Group 1 <sup>1</sup>		Group 2 <sup>2</sup>	
	Czechoslovak currency	United States currency	Czechoslovak currency	United States currency
	<i>Crowns</i>	<i>Cents</i>	<i>Crowns</i>	<i>Cents</i>
Thread makers.....	2.33	6.9	2.21	6.5
Labelers, spinners, workmen in storehouses.....	2.42	7.2	2.30	6.8
Workers on silk material, ribbons, etc.....	2.50	7.4	2.38	7.0
Workers on velvet and velveteen.....	3.00	8.9	2.88	8.5
Spooler tenders and auxiliary workers in spinning factories:				
Up to 20 years of age.....	1.98	5.9	1.88	5.6
Over 20 years of age.....	2.14-2.26	6.3-6.7	2.05-2.14	6.1-6.3
Cloth cleaners.....	1.92	5.7	1.83	5.3
Carpenters and locksmiths.....	2.74-3.50	8.1-10.4	2.62-3.34	7.8-9.9
Charwomen.....	1.80-2.09	5.3-6.2	1.71-1.98	5.1-5.9
Day laborers.....	1.91-2.27	5.7-6.7	1.83-2.15	5.3-6.4
Day laborers, heavy work.....	2.43	7.2	2.31	6.8
Dyers, skilled.....	2.78-3.17	8.2-9.4	2.65-3.02	7.8-8.9
Dyers' assistants, men.....	2.14-2.98	6.3-8.8	2.05-2.85	6.1-8.8
Dyers' assistants, women.....	1.98-2.34	5.9-6.9	1.89-2.22	5.6-6.6
Stokers and machine operators.....	2.59-2.96	7.7-8.8	2.48-2.82	7.3-8.4

<sup>1</sup> Includes factories in Hradsko, Moravsky Senberk, Moravska Trebova, Sternberk, and Wigstadtl, in the northern part of Moravia and Bohemia.

<sup>2</sup> Includes factories in all other places than those enumerated under Group 1.

The working week is, as a rule, 48 hours.

Overtime work is paid for at the rate of time and a quarter, and Sunday and night work at the rate of time and a half. For work on special holidays (New Year's, two Christmas holidays, Easter holiday, Monday after Whitsuntide, Corpus Christi Day, All Saints Day, and May 1) double rates are paid. Pieceworkers may not receive more than 10 per cent increase over the wages they should receive for a like working period when working by the hour.

Workers who are sick are entitled to 10 per cent of their wages during the third and fourth weeks of their illness, 20 per cent during the fifth and sixth weeks, and 30 per cent during the seventh and eighth weeks.

Workers are entitled to receive the regular rates for absence due to any of the following causes: Summons to appear at court, military examination or service, voting, bringing suit before the court, sudden sickness of parents, children, wife, or husband, births, death of husband or wife, or of sister or brother (provided they live in one common

<sup>1</sup> Data for this section furnished by John W. Bailey, jr., American consul at Prague.

household), or of parents or children, attendance at funerals when authorized by the management of the concern, and weddings.

### France

IN THE textile industry in France the working hours are limited to 48 per week. This limit was set by the 8-hour law of April 23, 1919, regulating the hours in all industries.

### Lyon district <sup>2</sup>

MOST of the weaving of silk and velvet in the Lyon district in France is done in the surrounding country districts. Table 2, which follows, shows the normal hourly rates in the various occupations in the silk industry in these country districts (the rate in the city of Lyon are somewhat higher), and in the weaving of velvet in Lyon.

The figures for the city of Lyon apply to silk-velvet manufacturers who also make mixtures with silk and cotton, silk and rayon, and rayon and cotton. Cotton velvet is not produced to any extent in the Lyon district.

While the normal hours of work are 48 per week, actually most of the factories are working only 40 hours and, in the opinion of the consul, many will probably soon be working as few as 32 hours.

The consul reports that, while no cut has yet been made in wages in the silk industry, some firms are taking advantage of the situation when engaging new workers, and are hiring labor at rates ranging on an average 10 per cent under the rates given in the table.

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<sup>2</sup> Data for this section furnished by Hugh H. Watson, American consul at Lyon.



TABLE 2.—NORMAL HOURLY RATES OF WAGES IN SILK AND VELVET INDUSTRIES IN THE LYON DISTRICT

[Conversions into United States currency on basis of franc=3.92 cents]

*Silk weaving and finishing (country districts)*

Occupation	Men		Women	
	French currency	United States currency	French currency	United States currency
Weaving:	<i>Francs</i>		<i>Francs</i>	
Bobbin winders.....			2.75	\$0.11
Reelers.....			2.75	.11
Warpers.....			3.25	.13
Weavers.....	4.00	\$0.16	3.25	.13
Loom fitters.....	<sup>1</sup> 1,250.00	<sup>1</sup> 49.00		
Loom fitters' apprentices.....	<sup>1</sup> 700.00	<sup>1</sup> 27.44		
Dyeing:				
Dyers.....	5.50-6.00	.22- .24		
Printers.....	6.50	.25		
Finishing:				
Finishers.....	4.00	.16		
Laborers.....	<sup>1</sup> 600.00	<sup>1</sup> 23.52		

*Velvet weaving (city of Lyon)*

Preparation and weaving:	<i>Francs</i>		<i>Francs</i>	
Bobbin winders.....			3.30	\$0.13
Reelers.....			3.15	.12
Warpers.....			3.15	.12
Weavers.....			3.50	.14
Stoppers.....			3.40	.13
Burlers.....			3.00	.12
Dyeing:				
Dyers.....	5.25	\$0.21		
Laborers.....	3.50	.14		
Finishing:				
Glazers.....	4.50	.18	3.10	.12
Combers.....	3.75	.15		
Luster ironers.....	3.90	.15		
Shavers.....	4.20	.17	2.90	.11
Finishers.....	3.95	.16	2.95	.12
Plush finishers.....	4.10	.16		
Folders.....			2.95	.12

<sup>1</sup> Per month.**Germany <sup>3</sup>**

WHILE during the first half of 1930, the textile workers in several German textile districts had succeeded in enforcing wage increases, textile wages remained stable throughout the rest of the year.

The following table shows the rates in force during January, 1931:

TABLE 3.—RATES OF WAGES PER HOUR AND PER WEEK IN THE GERMAN TEXTILE INDUSTRY, JANUARY, 1931

[Conversions into United States currency on basis of pfennig=.0238 cent, mark=23.8 cents]

Sex, and type of labor	Rate per hour		Rate per week	
	German currency	United States currency	German currency	United States currency
Males:	<i>Pfennigs</i>	<i>Cents</i>	<i>Marks</i>	
Skilled.....	79.4	18.9	38.11	\$9.60
Unskilled.....	66.7	15.8	32.02	7.65
Females:				
Skilled.....	58.1	13.8	27.89	6.58
Unskilled.....	46.9	11.2	22.51	5.36

<sup>3</sup> Data for this section furnished by A. T. Haeberle, American consul general at Dresden.

## Italy

THE hours of labor in the textile industry of Italy are fixed by law at 8 per day and 48 per week.

Florence <sup>4</sup>

THERE is only one small establishment in the Florence consular district which produces silk material. This establishment is in the city of Florence and specializes in the production of artistic silk and velvet tapestry, using designs peculiar to the ancient Florentine patterns. It is purely art work which is produced and the output is limited.

The factory employs at present 20 persons.

The wages paid are as follows: Male workers, from 2.50 to 3.50 lire (13-18 cents) an hour; female workers, from 1.50 to 2.50 lire (8-13 cents) an hour.

Genoa <sup>5</sup>

THE velvet industry, once very flourishing in Liguria, has been steadily declining since the end of the last century, with the result that it has now fallen into comparative insignificance. To-day only two factories remain, one of which produces only "patterned" velvet. According to the best information obtainable the present annual production of velvet in Liguria is in the neighborhood of 15,000 meters.<sup>6</sup>

All except the "patterned" velvet is made by women doing piecework in their homes. Each worker makes from 70 to 80 centimeters (approximately three-quarters of a yard, two feet wide) of velvet in 8 hours, which is the average working-day, earning thereby between 15 and 18 lire (from 79 to 95 cents) per day.

Venice <sup>7</sup>

*Silk and velvet industry.*—Wages are fixed by a collective agreement between the labor federation and the mill owners. The scale of basic time rates per day is as follows:

	Basic rate per day
Apprentices <sup>8</sup> .....	2 to 5 lire (11-26 cents)
Operatives winding bobbins, preparing distaff .....	5 to 12 lire (26-63 cents)
Weavers, loom workers .....	5 to 17 lire (26-89 cents)

The wages for piecework are specified in the following table.

<sup>4</sup> Data for this section furnished by Joseph Emerson Haven, American consul at Florence.

<sup>5</sup> Data for this section furnished by Cloyce K. Huston, American vice consul at Genoa.

<sup>6</sup> Meter = 1.196 square yards.

<sup>7</sup> Data for this section furnished by John Corrigan, American consul at Venice.

<sup>8</sup> Period of apprenticeship is 5 years.

TABLE 4.—PIECE RATES IN THE SILK AND VELVET INDUSTRY IN VENICE, FIXED BY AGREEMENT, AUGUST 21, 1926

[Conversions into United States currency on basis of lira=5.26 cents]

Class of work	Machine	Pattern quality	Nap	Mesh per centimeter <sup>1</sup>	Basic rate		Actual wage	
					Italian currency	United States currency	Italian currency	United States currency
Ridged	1616. 80	First quality silk	Silk waste	13	<i>Lire</i> 13. 00	\$0. 68	<i>Lire</i> 52. 00	\$2. 74
Velvet	1320. 80	do	First quality silk	12	12. 00	. 63	48. 00	2. 52
	1200. 80	do	Silk waste	10½	6. 00	. 32	24. 00	1. 26
	800. 80	do	First quality silk	11	6. 50	. 34	26. 00	1. 37
	800. 80	do	Silk waste	11	5. 00	. 26	20. 00	1. 05
	800. 40	Silk waste	do	10½	4. 00	. 21	16. 00	. 84
	800. 40	First quality silk	do	10½	4. 25	. 22	17. 00	. 89
	400. 80	do	First quality silk	11	5. 50	. 29	22. 00	1. 16
	400. 40	do	do	11	5. 25	. 28	21. 00	1. 10
	400. 80	do	Silk waste	10½	4. 50	. 24	18. 00	. 95
	400. 40	Silk waste or silk with cloth foundation.	do	10½	3. 75	. 20	15. 00	. 79
	400. 40	Silk waste or silk with shorn foundation, ribbed.	do	10½	3. 50	. 18	14. 00	. 74
	400. 20	Cotton cloth foundation	do	10½	3. 50	. 18	14. 00	. 74
Worked	1760. 40	Silk waste	do	10½	8. 00	. 42	32. 00	1. 68
	400. 80	First quality silk	First quality silk	13	5. 50	. 29	22. 00	1. 16
Velvet	400. 80	do	Silk waste	13	4. 50	. 24	18. 00	. 95
	400. 40	Silk waste or shorn silk, ribbed silk.	do	13	3. 50	. 18	14. 00	. 74
	400. 40	First quality silk	do	13	3. 50	. 18	14. 00	. 74
	400. 20	Cotton cloth foundation	do	10½	3. 50	. 18	14. 00	. 74
Double cut velvet.	400. 80	First quality silk	First quality silk	13	12. 00	. 95	48. 00	2. 52
Imitation velvet.	800. 40	Silk waste	Silk waste	10½	5. 75	. 30	23. 00	1. 21
Solid	. 40	do	do	10½	3. 75	. 20	15. 00	. 79
Color velvet	. 20	Cotton	do	10½	3. 50	. 18	14. 00	. 74

<sup>1</sup> Centimeter=0.3937 inch.

*Cotton industry.*—The basic rates for timework are shown in Table 5. These rates apply only to workmen of normal working efficiency.

TABLE 5.—TIME RATES IN THE COTTON INDUSTRY IN VENICE, PER DAY OF 8 HOURS

[Conversions into United States currency on basis of lira=5.26 cents]

Occupation and sex	Basic rate		Cost-of-living bonus	
	Italian currency	United States currency	Italian currency	United States currency
Dyers, bleachers, etc., male: <sup>1</sup>	<i>Lire</i>		<i>Lire</i>	
12 and under 15 years of age	3. 50-4. 50	\$0. 18-0. 24	3. 50-4. 50	\$0. 18-0. 24
15 and under 16 years of age	6. 00	. 32	6. 00	. 32
16 and under 18 years of age	7. 00	. 37	7. 00	. 37
18 and under 20 years of age	8. 25	. 43	8. 00	. 42
20 years of age and over	10. 00	. 52	9. 00	. 47
Weavers of Jacquard and upholstery materials	9. 60	. 50		
Females:				
12 and under 15 years of age	3. 50-4. 50	. 18-. 24	3. 50-4. 50	. 18-. 24
15 and under 17 years of age	5. 00	. 26	5. 00	. 26
17 years of age and over	6. 00	. 32	6. 00	. 32

<sup>1</sup> Women doing the same work as males are paid at the same rate; those on other work are paid at the rates shown under "females."



Piece rates are so adjusted as to allow the workmen to receive at least 15 per cent more than the total basic pay (high cost of living included).

### United Kingdom

THE consul reports that the cotton, rayon, and silk industries of the United Kingdom are closely related in so far as the manufacture of woven fabrics is concerned. Thus, with the exception of yarn manufacture, there is no exclusive rayon industry, because nearly all of the weaving is done by manufacturers of cotton and/or silk goods. Furthermore, the finishing (bleaching, dyeing, printing, making up, etc.) of these three classes of textiles is largely in the hands of several associations. In view of these and other facts, it is practically impossible to determine the scales of wages for what may be termed exclusively the cotton velvet, rayon, or other textile industries.

Broadly speaking, it may be said that in the silk industry wages are on the time-work basis, while in the cotton, cotton-velvet, and rayon manufacturing sections there is a complicated system of piece rates.

The hours of labor in all branches of the textile industry are, by agreement, 48 per week, to which they were reduced from 55½ on July 13, 1919.

### Cotton and Cotton Velvet (Velveteen) Industry<sup>9</sup>

ACCORDING to the Cotton Yearbook (Manchester), "the system of paying wages in the cotton industry is unique. All wages for spinning yard and manufacturing cloth are paid according to the amount of production. The elaborate piece-price lists which are now in existence have been handed down from generation to generation, probably from the time before the factory system came into being." A careful study of the system indicates that one of its important purposes is to equalize fairly the average earnings of all workers in a particular occupational class by increasing or diminishing the rate per unit of output in accordance with the time required for production. Thus there is only a relatively small variation in the weekly earnings of weavers, whether they produce many yards of coarse gray cloth or a few yards of fine velvet in a given time.

The table following shows the average earnings in the cotton industry in England, for a 48-hour week, in 1924.

TABLE 3.—AVERAGE WEEKLY EARNINGS IN THE ENGLISH COTTON INDUSTRY IN 1924  
[Conversions into United States currency on basis of £=\$4.8665]

Occupation and sex	English currency	United States cur- rency
	£ s. d.	
All workers <sup>a</sup> .....	1 16 0	\$8.76
Males <sup>a</sup> .....	2 7 0	11.44
Females <sup>a</sup> .....	1 8 3	6.87
Spinners:		
Adult piecers <sup>b</sup> .....	3 17 0	18.74
Semiskilled piecers.....	1 12 0	7.79
Unskilled piecers <sup>b</sup> .....	18 0	4.38
Weavers (per loom tended).....	10 6	2.56

<sup>a</sup> The present rates are 12.5 per cent lower than the 1924 rates.

<sup>b</sup> Unskilled piecers are paid by the adult piecers.

<sup>9</sup> Data for this section furnished by Wallace E. Moessner, American vice consul at Manchester.

The earnings of mixers, tenters, warpers, and general laborers are on an approximate level with those of spinners; reelers and doublers, winders and ring spinners receive the lowest wages, or some 30 per cent less than spinners; grinders, scutchers, twist-in, drawers-in, warehousemen and packers, and mechanics, usually earn slightly more than weavers; while sizers, foremen, twiners, ball warpers, warp dressers, enginemen, and firemen receive the highest wages paid in the industry.

*Cotton velvet or velveteen.*—As an illustration of the very complicated system of calculating weavers' wages and to indicate the position as regards cotton velvets, the following wage rates of weavers and spinners in the Lancashire velveteen industry are quoted from the "Oldham Velvet List."

The special list for weaving cotton velvets came into operation in its revised form in October, 1911. The basis of this list is:

	Per pound
45 to 49 inches weaving 56s weft.....	7d. (14. 2 cents)
50 to 54 inches weaving 56s weft.....	6 $\frac{13}{16}$ d. (13. 9 cents)
55 to 59 inches weaving 56s weft.....	6 $\frac{11}{16}$ d. (13. 6 cents)
60 to 64 inches weaving 56s weft.....	6 $\frac{9}{16}$ d. (13. 0 cents)
65 to 69 inches weaving 56s weft.....	6 $\frac{1}{2}$ d. (12. 8 cents)
70 to 74 inches weaving 56s weft.....	6 $\frac{3}{8}$ d. (13. 0 cents)
75 to 79 inches weaving 56s weft.....	6 $\frac{1}{4}$ d. (15. 4 cents)
80 to 84 inches weaving 56s weft.....	6 $\frac{1}{8}$ d. (12. 4 cents)
85 to 89 inches weaving 56s weft.....	6d. (12. 2 cents)

The above list is now subject to 92 $\frac{1}{2}$  per cent advance.

*Allowances for weft.*—In the above list, 56s weft is taken as the standard, and  $\frac{1}{8}$  penny [0.25 cent] per pound shall be added for each hank, as the weft is finer, and deducted for each hank coarser down to and including 40s. For counts coarser than 40s down to and including 16s see the following list.

Reed space, in weaving 28s weft:	Per pound
25 and 29 inches.....	4 $\frac{1}{2}$ d. (9. 12 cents)
30 and 34 inches.....	4 $\frac{5}{16}$ d. (8. 76 cents)
35 and 39 inches.....	4 $\frac{1}{8}$ d. (8. 36 cents)
40 and 44 inches.....	3 $\frac{15}{16}$ d. (6. 47 cents)
45 and 49 inches.....	3 $\frac{3}{4}$ d. (7. 60 cents)
50 and 54 inches.....	3 $\frac{9}{16}$ d. (7. 25 cents)
55 and 59 inches.....	3 $\frac{7}{16}$ d. (6. 99 cents)
60 and 64 inches.....	3 $\frac{5}{16}$ d. (6. 73 cents)
65 and 69 inches.....	3 $\frac{1}{4}$ d. (6. 59 cents)
70 and 74 inches.....	3 $\frac{1}{8}$ d. (6. 33 cents)
75 and 79 inches.....	3d. (6. 08 cents)
80 and 84 inches.....	2 $\frac{7}{8}$ d. (5. 81 cents)
85 and 89 inches.....	2 $\frac{3}{4}$ d. (5. 58 cents)

The foregoing list is now subject to 97 $\frac{1}{2}$  per cent advance.

*Allowances for weft.*—From the foregoing list, based on 28s weft,  $\frac{1}{8}$  penny per pound shall be deducted for each hank coarser, down to and including 16s; while [the following additions to the rate for 28s weft shall be made]:

	Additional rate
30s weft.....	$\frac{3}{16}$ d. (0. 39 cents)
32s weft.....	$\frac{7}{16}$ d. (0. 91 cents)
34s weft.....	$\frac{5}{8}$ d. (1. 25 cents)
36s weft.....	$\frac{7}{8}$ d. (1. 75 cents)
38s weft.....	1 $\frac{1}{16}$ d. (2. 16 cents)

Counts below 16s to be paid by mutual agreement.

Whenever the lists are narrower than the above tables,  $\frac{3}{16}$  penny [0.39 cent] per pound shall be added for each range of 5 inches, and if broader,  $\frac{1}{8}$  penny [0.25 cent] per pound shall be deducted for each similar range.

The foregoing rates are also subject to certain additions for lost pick; ribbed edges; superfine twill backs according to the number of reed; velvet cords; stripes; checks; plushes; mercerized yarns; velvets if more than 6 shafts; and Jacquard velvets.

*Rayon (woven on cotton looms).*—On October 7, 1925, an agreement between cotton weavers and employers was signed to regulate the payment of wages to those engaged in the production of all-rayon fabrics or fabrics of cotton-rayon mixtures.

This agreement, which takes into consideration the number of warp ends, selvages, borders, weft, fine counts, coarse counts, pick-finding, twist, etc., is equally as complicated as the "uniform list," but in general, it provides for increases per yard of output ranging from 5 to 50 per cent on the all-cotton rates. As already mentioned, however, the increased basic rates have little effect on actual earnings, their object being to provide for a smaller output on account of slower-loom operation or a smaller number of looms per weaver.

### Silk Industry <sup>9</sup>

The following tabulation shows the wages now paid to various groups of operatives in the silk industry of the United Kingdom:

TABLE 7.—WEEKLY WAGE RATES IN THE SILK INDUSTRY OF THE UNITED KINGDOM

[Conversions into United States currency on basis of £=\$4.8665]

Occupation	Weekly wage rates		Occupation	Weekly wage rates	
	English currency	United States currency		English currency	United States currency
Weavers.....	£ 2 11 0	\$12.41	<i>Thrown or hard section (adults)</i>		
Weavers, hand looms.....	3 0 6	14.72	Throwing mill men.....	£ 2 5 0	\$10.95
Smallware weavers: <sup>a</sup>			Doublers.....	1 9 6	7.18
Timework.....	1 9 0	7.06	Reelers.....	1 9 6	7.18
Piecework.....	1 13 7	8.17	Parters.....	1 10 6	7.42
Power loom overseers (men)	3 8 0	16.55	Danters.....	1 10 0	7.30
Power loom tacklers <sup>a</sup> (24 years of age and over)	3 11 6	17.40	Winders.....	1 8 0	6.81
Winders (female) <sup>a</sup> .....	1 8 0	6.81	Cleaners.....	1 8 0	6.81
Pickers (female) <sup>a</sup> .....	1 8 0	6.81	<i>Juniors (all sections)</i>		
Warpers <sup>a</sup> .....	1 11 6	7.66	Beginners (age 14):		
Twisters <sup>a</sup> .....	1 11 6	7.66	Males.....	10 0	2.43
Enterers <sup>a</sup> .....	1 11 6	7.66	Females.....	9 0	2.19
Machinists (making-up) <sup>a</sup> .....	1 13 7	8.17	Beginners (age 18):		
Knitters: <sup>a</sup>			Males.....	1 7 0	6.57
Timework.....	1 11 0	7.54	Females.....	1 4 0	5.84
Piecework.....	1 16 0	8.76	Beginners (age 20):		
Embroiderers (timework).....	1 7 6	6.69	Males.....	1 10 0	7.30
			Females.....	1 8 0	6.81

<sup>a</sup> Minimum; actual earnings said to average at least 10 per cent higher.

<sup>9</sup> Data for this section furnished by Wallace E. Moessner, American vice consul at Manchester.



*Rayon (woven on silk looms).*—The rates of wages shown in the preceding table apply.

*Textile dyeing industry.*—Adult male timeworkers earn an average wage of £2 5s. 4d. (\$11.03) per 48-hour week, and females £1 8s. 0d. (\$6.81). Male apprentices receive £1 4s. 0d. (\$5.84). Adults receive in addition, for overtime, from 3½ to 7 pence (7 to 14 cents) per hour.

### Velvet Industry <sup>9</sup>

AT THE present time the weaving of velvets in Great Britain is largely centered in Oldham, the cutting in Manchester and Warrington, and the dyeing and finishing in and near Manchester. There are some 30 weaving concerns in Lancashire whose principal or most important business is the manufacture of cotton velvet and velveteen; these companies possess some 25,000 looms, only about 9,000 of which are "velvet" looms.

Very few velvet-weaving concerns in the United Kingdom cut, dye, or finish their products, these processes being done by two large associations.

*Production costs.*—It has been determined that the average United Kingdom home-market wholesale value of cotton velvet during the year 1930 was the equivalent in United States currency of 67 cents per square yard. The following statement shows the 1930 production cost of cotton velvet per square yard:

	Cents
Cost of yarn.....	<sup>10</sup> 27. 14
Weavers' wages.....	<sup>10</sup> 1. 89
All other expenses and profit.....	<sup>10</sup> 6. 99
Weavers' selling price.....	36. 02
Cost of—	
Cutting.....	6. 72
Stiffening.....	. 54
Ending-mending.....	. 46
Dressing, dyeing, and finishing.....	14. 82
Making-up.....	1. 44
Manufacturer's selling price.....	60. 00
Merchant's profit.....	7. 00
Wholesale or export price.....	67. 00

### Wool Industry <sup>11</sup>

AT THE present time the wage situation in the British wool-textile industry is rather confused, because of the absence of an agreement between the employers and employees in the largest manufacturing district, due to a dispute last year on the question of reductions in wages.

In the past few years rates and wages in the English and Welsh wool-textile industry were negotiated by the National Wool (and Allied) Textile Industrial Council, an organization composed of representatives appointed by the various employers' federations and employees' trade-unions, and established in 1919 for the purpose of

<sup>9</sup> Data for this section furnished by Wallace E. Moessner, American vice consul at Manchester.

<sup>10</sup> Approximate.

<sup>11</sup> Data for this section furnished by Clement S. Edwards, American consul at Bradford.

negotiating wage agreements. The national council is composed of three district councils, representing Northern England, the West of England, and Wales, respectively. Each district council negotiates the wage agreement for its own area, the individual arrangements being subject to ratification by the national council. There is also a branch of the wool-textile industry in Scotland, but in that area wages are arranged locally between the local employers' federation and the employees' national trade-union. Of the total number of persons employed in the British wool-textile industry, the Northern Counties District Wool (and Allied) Textile Industrial Council represents approximately 80 per cent of the employers and workpeople.

The agreement in the north of England expired on January 1, 1927, and in October of that year the employers requested the workers to accept a reduction in wages. Negotiations between representatives of the two sides were prolonged for more than two years and failed to result in an agreement. Certain employers in the heavy wool district of Yorkshire enforced reductions on their own responsibility, but the majority of the employers continued to negotiate as an organized body. Owing to the failure to reach an agreement, the Minister of Labor appointed a court of inquiry to investigate the matters in dispute, although the findings of this court were not to be binding upon either of the disputants. After an investigation the court recommended that the wages of time workers should be reduced by 9.249 per cent and those of piece workers by 8.766 per cent.

The employers accepted the recommendation and proposed a new agreement on the basis of these reductions, but the workers refused to allow their representatives to negotiate and a strike was declared. Eventually the majority of the employees drifted back to their employment, accepting the reductions recommended by the court of inquiry, but in two districts where the resistance was strongest the employers imposed reductions of only 5.8 per cent and 7.25 per cent. As a result of the lack of unity among the workers in accepting the proposed terms of employment, each employer made a separate agreement with his workpeople and there is consequently no official wage agreement for the northern England branch of the wool-textile industry. The National Association of Unions in the Textile Trade states, however, that over 90 per cent of the employees in the northern England branch are now working on the basis of the wages in the last agreement reduced by the percentages recommended by the Government court of inquiry. Although these rates are not incorporated in an agreement between the employers and employees, they are generally regarded as the current official rates for the chief center of the industry. In the west of England, Wales, and Scotland, existing wage rates are from 10 to 15 per cent below those now paid in the north of England.

In both the manufacture and the dyeing of wool textiles, overtime on any one day is paid for at the rate of time and a quarter for the first two hours and time and a half for all hours in excess of two hours on that day. All overtime on Saturday is paid for at the rate of time and a half, and on Sunday at double rates.

The following table shows the current weekly wage rates in the manufacture of wool textiles in northern England:

TABLE 8.—CURRENT WEEKLY WAGES IN WOOL-TEXTILE INDUSTRY OF NORTHERN ENGLAND

[Conversions into United States currency on basis of £=\$4.8665]

Section and occupation	Weekly wage rates of—			
	Males, 21 years of age and over		Females, 21 years of age and over	
	English currency	United States currency	English currency	United States currency
<i>Raw-wool section</i>				
Wool sorters.....	£ 3 2 5	\$16.40		
Wool warehousemen.....	2 10 7	12.31		
<i>Wool-combing section</i>				
Day work:				
Wool pullers.....	2 7 10	11.64		
Bowl feeders.....	2 7 10	11.64		
Bowl minders, with dryers.....	2 10 10	12.37		
Bowl minders, without dryers.....	2 10 2	12.21		
Wool dryers, hand.....	2 9 0	11.92		
Wool dryers, machine.....	2 7 10	11.64		
Makers-up.....	2 6 4	11.27		
Breakers-off, 2 laps.....			1 11 5	\$7.54
Breakers-off, 3 laps.....	2 6 4	11.27	1 12 2	7.50
Breakers-off, 4 laps.....	2 7 1	11.46		
Wool runners.....	2 7 10	11.64		
Card feeders, hand.....			1 11 1	7.33
Card jobbers, 7 or less.....	2 9 0	11.92		
Card jobbers, 8 or more.....	2 10 2	12.21		
Backwash minders.....	2 7 5	11.54	1 12 11	8.00
Box minders, 2 boxes.....			1 11 0	7.33
Punch minders, 8 combs or less.....			1 11 5	7.44
Comb minders, with noil, 2 combs.....			1 13 10	8.22
Comb minders, without noil, 2 combs.....			1 12 11	8.00
Punch minders, 9 combs or more.....			1 12 2	7.93
Finishing boxminders.....			1 11 9	7.73
Card grinders, wood cards.....	2 12 6	12.77		
Card grinders, iron cards.....	2 17 0	13.87		
Wool-combing overseers.....	3 13 7	19.47		
Other occupations <sup>1</sup> .....	2 6 4	11.27	1 11 1	7.33
Night work:				
Wool pullers.....	2 10 2	12.21		
Bowl feeders.....	2 10 2	12.21		
Bowl minders, with dryers.....	2 13 0	12.90		
Bowl minders, without dryers.....	2 12 2	12.69		
Wool dryers, hand.....	2 11 4	12.49		
Wool dryers, machine.....	2 10 2	12.21		
Makers-up.....	2 9 10	12.13		
Breakers-off, 3 laps.....	2 9 10	12.13		
Breakers-off, 4 laps.....	2 10 7	12.31		
Wool runners.....	2 10 2	12.21		
Card feeders, hand.....	2 9 10	12.13		
Card jobbers, 7 or less.....	2 11 5	12.51		
Card jobbers, 8 or more.....	2 11 7	12.55		
Backwash minders.....	2 10 2	12.21		
Box minders, 2 boxes.....	2 10 2	12.21		
Punch minders, 8 combs or less.....	2 11 5	12.51		
Comb minders, with noil, 2 combs.....	2 14 4	13.22		
Comb minders, without noil, 2 combs.....	2 12 6	12.77		
Punch minders, 9 combs or more.....	2 11 7	12.55		
Finishing boxminders.....	2 11 5	12.51		
Other occupations.....	2 9 10	12.13		



TABLE 8.—CURRENT WEEKLY WAGES IN WOOL-TEXTILE INDUSTRY OF NORTHERN ENGLAND—Continued

Section and occupation	Weekly wage rates of—			
	Males, 21 years of age and over		Females, 21 years of age and over	
	English currency	United States currency	English currency	United States currency
<i>Worsted-spinning section</i>			Females and juveniles of both sexes	
	£ s. d.		£ s. d.	
First drawers.....			1 6 11	\$6.55
Second drawers.....			1 6 1	6.35
Rovers and reducers.....			1 5 2	6.12
Twisters.....			1 6 1	6.35
Winders.....			1 4 4	5.92
Reelers.....			1 6 11	6.55
Warpers and beamers.....			1 9 5	7.10
Doffers.....			1 1 6	5.23
Spinners.....			1 3 11	5.82
Wool warehousemen.....	2 10 7	\$12.31		
Yarn warehousemen.....	2 9 9	12.11		
Spinning overseers.....	3 13 7	17.90		
<i>Worsted-weaving section</i>			Females, 21 years of age and over	
			£ s. d.	
Warp twisters.....	3 5 10	16.02		
Warp dressers.....	3 5 10	16.02		
Weaving overseers.....	3 13 7	17.90		
Cribbler's feeders.....			1 9 3	\$7.12
Weavers and other adult females.....			1 9 3	7.12
<i>Heavy-woolen section</i>				
Willeys and fettlers.....	2 11 9	14.60		
Dyers.....	2 9 10	12.13		
Millers.....	2 9 10	12.13		
Scourers.....	2 9 13	12.13		
Finishers.....	2 9 10	12.13		
Blenders.....	2 9 10	12.13		
Rag grinders.....	2 9 10	12.13		
Carbonizers.....	2 9 10	12.13		
Pattern weavers.....	2 9 10	12.13		
Woolen spinners.....	2 9 10	12.13		
Woolen beamers.....	2 9 10	12.13		
Woolen warpers.....	2 9 10	12.13		
Adult males, unclassified.....	2 7 10	11.64		
Weavers and other adult females.....			1 9 3	7.12
<i>Merchanting section</i>				
All occupations:				
Age 19 years.....	1 15 5	8.62		
Age 20 years.....	1 16 5	8.85		
Age 21 years.....	2 1 9	10.20		
Age 22 years.....	2 4 1	10.73		
Age 23 years.....	2 7 6	11.56		
Age 24 years.....	2 10 9	12.35		

Boys and youths in the wool-combing section start at £1 11s. 7d. (\$7.69) per week, while in the heavy-woolen section they start at 17s. 3d. (\$4.20) at 14 years of age and proceed by annual increases to the standard of £2 9s. 10d. (\$12.13) at 21 years of age.

Piecework earnings vary so greatly that it is not possible to classify them. Every person working at piece rates is expected to earn at least 25 per cent more than the time-work rate, and in the majority of cases scheduled piecework rates equal the appropriate time rate plus 25 per cent of that rate.

*Wool-textile dyeing.*—At the present time a new agreement is being negotiated in the wool-textile dyeing industry, which contemplates a reduction of approximately 5.11 per cent in the wages paid during the past few years. The negotiations have not been finally concluded, but in view of the fact that the original request of the employers was for a reduction of 15 per cent it is believed by local trade-union leaders that the proposed new rates will be adopted.

The new rates proposed for all operatives in the wool-textile dyeing industry are shown in Table 9:

TABLE 9.—PROPOSED 1931 RATES OF WAGES IN ENGLISH WOOL-TEXTILE DYEING INDUSTRY

[Conversions into United States currency on basis of £=\$4.8665]

Sex and age	Weekly wage rates		Sex and age	Weekly wage rates	
	English currency	United States currency		English currency	United States currency
Males:	£ s. d.		Males:	£ s. d.	
14 years of age.....	14 0	\$3.41	18½ years of age.....	1 11 1	\$7.56
15 years of age.....	16 2	3.93	19 years of age.....	1 15 3	8.58
16 years of age.....	18 5	4.48	19½ years of age.....	1 17 6	9.12
16½ years of age.....	1 0 7	5.01	20 years of age.....	1 19 8	11.44
17 years of age.....	1 2 9	5.54	20½ years of age.....	2 1 11	10.20
17½ years of age.....	1 5 0	6.08	21 years of age.....	2 7 6	11.58
18 years of age.....	1 10 10	7.50	Females.....	1 7 6	6.68

Piecework rates are based upon time rates, plus 25 per cent of the appropriate rate.

#### Linen Industry (Northern Ireland)<sup>12</sup>

THE table following shows the scale of wage rates in the linen industry of Northern Ireland at the end of August, 1931. There has been no appreciable change since that time, with the exception of a new wage scale which came into operation March 2, 1931, reducing the wages of weavers, winders, and kindred workers as follows:

Reduction of 7 per cent on the standard scale, equivalent to 9.7 per cent on current piece rates, and a 10 per cent reduction in the wages of all time workers, subject to (a) a reduction of 96 cents per week in time rates of card cutters and dressers, and of 72 cents per week in time rates for mounters, assistant mounters, cloth passers, winding masters, enginemen, and firemen; and (b) a reduction in dressers' wages of 10 per cent off the set pay, of 10 per cent off piece rates for sets up to and including 1,200, and from 1,200 upwards a reduction of 5 per cent.

<sup>12</sup> Data for this section supplied by Leonard N. Green, American consul at Belfast.

TABLE 10.—AVERAGE WAGE RATES IN THE LINEN INDUSTRY OF NORTHERN IRELAND, AUGUST 31, 1929

[Conversions into United States currency on basis of £=\$4.8665]

Occupation and sex	Average wage rates	Occupation and sex	Average wage rates
<i>Spinning and preparing section</i>		<i>Wearing section</i>	
Flax dressers.....	<i>Per week</i> \$12.96	Tenters.....	<i>Per week</i> \$13.92
Belfast district—		Mounters.....	12.00
Females:		Assistant mounters and cord tiers.....	8.60
Spreaders, carders, and piecers.....	<i>Per hour</i> \$0.11	Card cutters (when transferred to do other work).....	13.92
Rovers and drawers.....	.11	Yarn dressers.....	13.92
Spinners.....	.12	Slashers.....	12.96
Layers.....	.10	Cloth passers.....	10.56
Reelers.....	.11	Winding masters.....	11.28
Doffers (preparing).....	.08	Laborers.....	8.04
Doffers (spinning).....	.09	Enginemmen and firemen.....	11.28
Other districts—		Mechanics.....	15.00
Females:			
Spreaders, carders, and piecers.....	.10		
Rovers and drawers.....	.10		
Spinners.....	.11		
Layers.....	.09		
Reelers.....	.10		
Doffers (preparing).....	.07		
Doffers (spinning).....	.08		

### Working Hours and Labor Costs of Production in European Coal Mines, 1929

A STUDY of wages and hours of labor in 1929 in anthracite and bituminous coal mines of Europe, made by the International Labor Office, is published in the International Labor Review of that office for May, 1931. The countries covered are Belgium, Czechoslovakia, France, Germany, Great Britain, Netherlands, Poland, and the Saar. Wherever possible, workers in supervisory and salaried positions as well as workers in auxiliary establishments, such as coke ovens, briquette factories, etc., were excluded; the study, therefore, covers mainly manual workers in coal mines. For Great Britain certain categories of workers ("deputies" and others) covered by collective agreements were included, but the report states that the inclusion of the wages of these workers had little effect on the general averages and consequently the British figures may be regarded as comparable with those for the other countries. The statistics for Great Britain cover about 97 per cent of the coal industry of that country; for Germany they relate to the three principal coal-producing districts, which together supplied 92 per cent of the German output in 1929. The figures for Saxony include auxiliary undertakings.

The countries represented in the report produced 92.3 per cent of the entire output of the European coal mines in 1929. Table 1 shows the output of coal in Europe in 1929, together with the per cent of the total produced by each country.



TABLE 1.—OUTPUT OF EUROPEAN COAL MINES IN 1929  
[Metric ton=2,204.3 pounds]

Country	Gross production (metric tons)	Per cent of total production
Belgium.....	26,932,000	4.2
Czechoslovakia.....	16,752,000	2.6
France.....	53,736,000	8.3
Germany.....	163,441,000	25.4
Great Britain.....	262,045,000	40.7
Netherlands.....	11,575,000	1.8
Poland.....	46,236,000	7.2
Saar.....	13,579,000	2.1
Russia.....	40,092,000	6.2
Spain.....	7,035,000	1.1
Other countries.....	2,959,000	.4
Total.....	644,382,000	100.0

As in the last previous study by the International Labor Office for 1927 (published in the International Labor Review for October and December, 1929), the average labor cost per worker, as given in the report, is based on the total labor costs, which included not only money earnings of the workers but allowances of all kinds plus the employers' social insurance contributions. The relative importance of the different items making up the total labor costs in the several countries covered by the survey is shown in Table 2. Two sets of figures are given, one excluding and the other including employers' social insurance contributions. According to the report, the underground workers' proportion of the total costs varied from about 70 to 85 per cent and that of surface workers, from 15 to 30 per cent.

TABLE 2.—RELATIVE IMPORTANCE OF DIFFERENT ITEMS IN TOTAL LABOR COSTS IN EUROPEAN COAL MINES IN 1929

Country and district	Per cent of total labor cost formed by—							Net money wages
	Workmen's insurance contributions	Allowances in cash	Free or cheap coal	Other allowances in kind	Payment for holidays	Employers' insurance contributions	Total items other than money wages	
<i>Excluding employers' insurance contributions</i>								
Belgium.....	2.1	2.0	3.9	( <sup>1</sup> )	-----	-----	8.0	92.0
Czechoslovakia.....	6.1	2.8	6.4	1.1	2.3	-----	18.7	81.3
France.....	5.1	3.2	2.1	9.3	-----	-----	19.7	80.3
Germany:								
Ruhr.....	13.2	2.9	1.5	( <sup>1</sup> )	2.9	-----	20.5	79.5
Upper Silesia.....	13.9	2.7	2.6	( <sup>1</sup> )	2.0	-----	21.2	78.8
Saxony.....	13.9	1.2	2.4	( <sup>1</sup> )	2.5	-----	20.0	80.0
Great Britain.....	2.6	-----	2.5	1.5	-----	-----	6.6	93.4
Netherlands.....	0.7	4.2	.7	1.7	2.1	-----	15.4	84.6
Poland.....	7.7	5.3	3.9	5.7	2.5	-----	25.1	74.9
Saar.....	7.6	6.1	3.2	.3	1.6	-----	18.8	81.2
<i>Including employers' insurance contributions</i>								
Belgium.....	2.0	1.9	3.7	( <sup>1</sup> )	-----	4.3	11.9	88.1
Czechoslovakia.....	5.5	2.5	5.8	1.0	2.1	9.2	26.1	73.9
France.....	4.8	2.9	1.9	8.6	-----	7.2	25.4	74.6
Germany:								
Ruhr.....	11.7	2.6	1.3	( <sup>1</sup> )	2.4	11.9	29.9	70.1
Upper Silesia.....	12.1	2.3	2.3	( <sup>1</sup> )	1.8	12.9	31.4	68.6
Saxony.....	12.0	1.1	2.1	( <sup>1</sup> )	2.2	13.1	30.5	69.5
Great Britain.....	2.4	-----	2.4	1.4	-----	5.3	11.5	88.5
Netherlands.....	6.1	3.8	.6	1.5	1.9	9.6	23.5	76.5
Poland.....	7.0	4.7	3.6	5.1	2.3	9.6	32.3	67.7
Saar.....	7.1	5.7	2.9	.2	1.5	7.2	24.6	75.4

<sup>1</sup> Less than one-tenth of 1 per cent.

## WAGES AND HOURS OF LABOR

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It will be noted that the relative importance of the various items other than money wages entering into the total labor costs varies considerably as between countries, ranging from 6.6 per cent of the total labor costs in Great Britain to 25.1 per cent in Poland when employers' social insurance contributions are excluded, and when these are included, from 11.5 per cent in Great Britain to 32.3 per cent in Poland. Allowances in cash (family allowances) are paid in all of the countries except Great Britain. "Other allowances in kind" consist chiefly of free or cheap housing; such allowances were particularly high in France, it is stated, because of the extension of workers' housing schemes in the Nord and Pas-de-Calais coal fields. Payments for holidays are not made in Belgium, France, or Great Britain. In Germany and the Saar the workers' and employers' social insurance contributions tend to be about equal, but elsewhere the employers' contributions form a much higher percentage of the total labor costs than do the employees' contributions.

Table 3 shows the average labor cost per metric ton of coal produced in the different countries in 1929. The figures in this table give the money cost in terms of Swiss francs (as converted by the International Labor Office) and in United States currency, as well as the relative costs in terms of index numbers. Separate averages are presented for "salable" coal (the product remaining after elimination of waste by washing and screening) and for "commercially disposable" coal (the balance remaining after deducting the amount of coal consumed by the mine and that distributed to the workers).

TABLE 3.—AVERAGE LABOR COST PER METRIC TON OF COAL PRODUCED IN EUROPEAN COAL MINES IN 1929, AND INDEX NUMBERS THEREOF  
[Conversions into United States currency on basis of Swiss franc=19.3 cents]

Country and district	Excluding employers' insurance contributions				Including employers' insurance contributions			
	Salable coal		Commercially disposable coal		Salable coal		Commercially disposable coal	
	Swiss currency	United States currency	Swiss currency	United States currency	Swiss currency	United States currency	Swiss currency	United States currency
	<i>Francs</i>		<i>Francs</i>		<i>Francs</i>		<i>Francs</i>	
Belgium.....	12.17	\$2.50	14.71	\$2.84	13.55	\$2.62	15.36	\$2.96
Czechoslovakia.....	7.23	1.41	7.81	1.51	8.01	1.55	8.60	1.66
France.....	11.30	2.18	12.66	2.44	12.17	2.35	13.63	2.63
Germany:								
Ruhr.....	9.08	1.75	9.71	1.87	10.30	1.99	11.03	2.13
Upper Silesia.....	6.33	1.22	6.60	1.27	7.28	1.41	7.58	1.46
Great Britain.....	10.84	2.09	13.42	2.59	11.45	2.21	14.17	2.73
Netherlands.....	9.73	1.88	10.10	1.95	10.74	2.07	11.16	2.15
Poland.....	4.71	.91	5.20	1.00	5.20	1.00	5.76	1.11
Saar.....	11.84	2.29	13.25	2.56	12.75	2.46	14.28	2.76
<i>Index numbers (Great Britain=100)</i>								
Belgium.....	120		110		118		103	
Czechoslovakia.....	67		58		70		61	
France.....	104		54		106		96	
Germany:								
Ruhr.....	84		72		90		78	
Upper Silesia.....	58		49		64		53	
Great Britain.....	100		100		100		100	
Netherlands.....	90		75		94		79	
Poland.....	43		39		45		41	
Saar.....	109		99		111		101	

An indication of the relative efficiency of labor and the difference in natural conditions in the various countries is found in Table 4 taken from the report, giving the average output of salable coal per worker. A comparison of Table 4 with Table 3 shows that in the countries where average output is very high the labor cost per unit of production is relatively low and vice versa. For example, the average output of salable coal per worker per year in Poland is given as 370 metric tons and in France as 190 metric tons. The average labor cost of producing a metric ton of salable coal in Poland (reduced to a common currency), exclusive of the employers' social insurance contributions, was found to be 4.71 Swiss francs (91 cents) as compared with 11.30 Swiss francs (\$2.18) in France.

TABLE 4.—AVERAGE OUTPUT OF SALABLE COAL PER WORKER IN EUROPEAN COAL MINES IN 1929

Country and district	Average output per worker (in metric tons <sup>1</sup> )—					
	Per shift		Per day		Per year	
	Under-ground workers	All workers	Under-ground workers	All workers	Under-ground workers	All workers
Belgium.....			0.836	0.576		
Czechoslovakia.....	1.315	1.009	1.362	1.058	361	
France.....	.987	.694	.993	.699	266	
Germany:						
Ruhr.....	1.557	1.271	1.581	1.300	422	
Upper Silesia.....	1.775	1.377	1.859	1.451	485	
Saxony.....	.869	.658	.916	.697	238	
Great Britain.....	1.395	1.102	1.453	1.148	348	
Netherlands.....	1.714	1.193			462	
Poland.....	1.874	1.264	2.013	1.381	534	
Saar.....	1.123	.801			312	

<sup>1</sup> Metric ton=2,204.6 pounds.

The hours of labor of underground workers as fixed either by legislation or by collective agreements or arbitration awards are shown in Table 5, together with the individual time spent in the mine and at the face, minus breaks. The International Labor Office points out that the figures showing the time spent at the face minus breaks are to be accepted with reservations, as "the figures used for calculating this time, namely, the total traveling time and the duration of breaks, can not be determined with absolute accuracy. They are generally approximate figures and must be accepted with caution; their value naturally influences the value of the figure showing the time spent at the face less breaks."



TABLE 5.—HOURS OF WORK OF UNDERGROUND WORKERS IN EUROPEAN COAL MINES, 1929

Country and district	Regulation hours of work				Individual time spent in mine		Length of time spent at face, minus breaks <sup>1</sup>	
	Day or shift		Week		Day or shift	Week	Day or shift	Week
	Fixed by legislation	Fixed by collective agreements or arbitration awards	Fixed by legislation	Fixed by collective agreements or arbitration awards				
	Hours	H. m.	Hours	Hours	H. m.	H. m.	H. m.	H. m.
Belgium.....	8		48		8 0	48 0	6 20	38 0
Czechoslovakia.....	8	8 0	48	2 46	7 28	44 48	5 36 4 52	33 36 35 12
France: <sup>5</sup>								
Whole country <sup>6</sup>	8				7 52	47 12	7 6 35	7 39 30
Nord and Pas-de-Calais.....	8				7 54	47 24	6 39	39 54
Lorraine.....	8				7 51	47 6	6 40	40 0
Other coal fields <sup>6</sup>	8				7 50	47 0	6 29	38 54
Germany:								
Ruhr.....	8	8 0						
Aachen.....	8	8 15						
Upper Silesia.....	8	8 0						
Lower Silesia.....	8	8 0						
Saxony.....	8	8 0						
		7 30			8 0	44 15	6 15	33 45
		to			to	to	to	to
Great Britain.....	8	8 0			8 30	50 0	6 45	40 30
		7 49			8 19	47 28	6 34	37 5
Netherlands.....		8 0		46	8 10	47 0	10 6 10	35 0
Poland:								
Upper Silesia.....	8	8 0		48	8 2	48 12	6 18	37 48
Dombrowa and Cracow.....	8		46		11 8 30	49 0	12 6 16	35 46
Saar.....	8	7 30	48		7 30	45 0	6 15	37 30

<sup>1</sup> Actual individual time spent in mine less total traveling time underground and breaks, but not including any other lost time or waiting period.

<sup>2</sup> The hours of work fixed by collective agreement are 46 a week, with a "permanent undertaking on the part of the workers" to work 2 additional hours on Saturday in return for special overtime pay.

<sup>3</sup> The time for the return journey underground includes an average waiting period of 16 minutes at the pit bottom.

<sup>4</sup> Average waiting period of 16 minutes at pit bottom not taken into consideration.

<sup>5</sup> Figures represent average time spent in the mine, and time spent at face less breaks, of hewers on morning shift.

<sup>6</sup> Weighted averages.

<sup>7</sup> Obtained by deducting from individual time spent in the mine only the underground traveling time and the collective rest period, no account being taken of other time lost.

<sup>8</sup> Period calculated for each individual worker from time of entering cage to descend until time of leaving it after ascending. It includes both individual winding times.

<sup>9</sup> 6 hours and 10 minutes worked on Saturday.

<sup>10</sup> 4 hours and 10 minutes worked on Saturday.

<sup>11</sup> Includes a statutory break of 30 minutes; 6 hours and 30 minutes worked on Saturday.

<sup>12</sup> 4 hours and 26 minutes worked on Saturday.

The regulation hours of work of underground workers in 1929 in the countries listed were the same as in 1927, the date of the last previous study by the International Labor Office. However, it is noted that in Upper Silesia the duration of the individual shift since April 1, 1928, has included both individual winding times instead of only the individual descent as formerly, and that in several localities, namely, France, the Dombrowa and Cracow coal fields in Poland, and the Saar, there had been slight changes in the individual time spent in the mine or at the face less breaks.

## Farm Workers' Wages in Great Britain

**W**AGES and hours of labor for farm workers in Great Britain are fixed by local committees, whose decisions must be reviewed and approved by the agricultural wages board before they are effective. A definite term for the operation of a given rate may be set, but it is more common to leave the time indefinite, reviewing the situation and issuing a new award when conditions have changed or some other cause for alteration has arisen. If there is no special cause of this kind, new decisions are apt to be issued in the spring or, more often, the old decision is reaffirmed and issued as a rate for the coming year. This process is now going on in England, and the Labor Magazine, in its issue for May, 1931, gives the following rates which have been set as the minimum weekly wage<sup>1</sup> for adult unskilled laborers in the counties named:

	s.	d.	
Cheshire.....	37	0	(\$9. 00)
Herefordshire.....	31	0	(\$7. 54)
Lancashire, South.....	33	6	(\$8. 15)
Lancashire, North.....	37	6	(\$9. 12)
Leicestershire.....	34	0	(\$8. 27)
Rutland.....	32	6	(\$7. 91)
Radnor and Brecon.....	31	0	(\$7. 54)
Merioneth and Montgomery.....	30	0	(\$7. 40)

These rates are the same as were in force when the Ministry of Agriculture and Fisheries issued a report on the subject in 1928, but in Leicestershire and Rutland the weekly hours have been increased from 54 to 56½ for summer and in Rutland the winter hours also have been increased from 50 to 54.

In Suffolk the minimum weekly wage for unskilled adult laborers has just been set at 28s. (\$6.81), a reduction of 2s. (49 cents), after a bitter struggle. Under the agricultural wages act of 1924, if either side is dissatisfied with a rate, an appeal may be made from the order of the wages board to the Minister of Agriculture, who, if he considers the objection valid, may refer the decision back to the board for further consideration, but this is the limit of his powers in the matter. This course was followed in Suffolk; the workers' representatives appealed the matter to the minister, who referred it back to the board, but according to the Manchester Guardian for May 4, after much discussion the decision was reaffirmed.

According to the same authority, the agricultural laborers' union takes the matter very seriously and is declaring that for the sake of the workers as a whole the decision must be resisted. Just what form resistance should take has not been decided, but there is talk of applying to the Government for help. A short act of Parliament, it is suggested, might establish some impartial reviewing agency with more power than is given to the Minister of Agriculture under the present act.

<sup>1</sup> Conversions into United States currency on basis of shilling=24.33 cents; penny=2.03 cents.

## Average Weekly Earnings of British Coal Miners

ON APRIL 28, 1931, a member of the British House of Commons asked for a statement of the average weekly earnings of the coal miners in each of the separate districts for each of the last five years, and in reply the Secretary of Mines presented a table<sup>1</sup> showing the weekly cash earnings from 1925 to 1930, with the exception of 1926, a year in which output and earnings were so affected by the prolonged stoppage that it is usually omitted from such tabulations. It was explained that these figures do not include the value of allowances in kind, which during the first nine months of 1930 varied from about 5s. 4d. (\$1.30) per week in Northumberland and Durham to about 2½d. (5 cents) a week in Scotland, Lancashire, Cheshire, and North Staffordshire. For South Wales and Monmouth the figures for 1927 to 1929 relate to the years ending January, 1928, 1929, and 1930, and those for 1930 to the nine months ending October, 1930. The 1930 average for Great Britain is provisional.

## AVERAGE WEEKLY EARNINGS OF BRITISH COAL MINERS, 1925 TO 1930

[Conversions into United States currency on basis of £ = \$4.8635]

District	1925	1927	1928	1929	1930
Scotland.....	\$13.12	\$12.75	\$12.49	\$12.73	\$12.25
Northumberland.....	11.05	10.20	9.10	9.37	8.96
Durham.....	11.60	10.83	9.73	9.96	9.63
South Wales and Monmouth.....	13.02	11.58	11.78	12.06	11.50
Yorkshire.....	12.69	11.68	10.54	11.17	10.77
North Derbyshire and Nottinghamshire.....	12.69	11.94	10.58	11.21	11.01
South Derbyshire, Leicestershire, Cannock Chase, and Warwickshire.....	12.69	11.94	10.30	10.77	10.69
Lancashire, Cheshire, and North Staffordshire.....	11.21	10.63	9.71	10.16	10.14
Cumberland, North Wales, South Staffordshire, Shropshire, Bristol, Forest of Dean, Somerset, and Kent.....	11.36	10.97	10.34	10.81	10.89
Great Britain.....	12.33	11.48	10.65	11.67	10.79

## Wages of Woodworkers in Novara, Italy

AN AGREEMENT made between the Autonomous Fascist Federation of Mechanics and the Fascist Provincial Union of Industry contains the following scale of hourly wages<sup>2</sup> for Novara, effective June 1, 1931:

	Lire
Carvers.....	2.85 (15.0 cents)
Finishers.....	2.75 (14.5 cents)
Cabinetmakers, carpenters, first category.....	2.65 (13.9 cents)
Carvers, finishers, cabinetmakers, carpenters, second category.....	2.10 (11.0 cents)
Apprentices.....	.90-1.75 (4.7-9.2 cents)
Boys over 5 years old.....	.30-0.80 (1.6-4.2 cents)

The second category includes those who have worked at their trade three years or less after finishing their apprenticeship period. Piece-work prices are arranged so as to give a fast worker 20 per cent in advance of time-work prices. For overtime, 20 per cent extra is paid for the first two hours and 30 per cent thereafter; for work at night or on Sunday 50 per cent extra is paid.<sup>3</sup>

<sup>1</sup> Great Britain. Parliamentary Debates, Apr. 28, 1931, p. 1463.

<sup>2</sup> Conversions into United States currency on basis of lira = 5.26 cents.

<sup>3</sup> Data are from *Il Lavoro Fascista* (Rome), May 23, 1931.



# TREND OF EMPLOYMENT

## Summary for May, 1931

**E**MPLOYMENT and pay-roll totals both decreased 0.9 per cent in May, 1931, as compared with April, 1931.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both April and May, together with the per cent of change in May, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, APRIL AND MAY, 1931

Industrial group	Estab- lish- ments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
1. Manufacturing.....	14, 896	3, 014, 008	2, 999, 224	-0.5	\$72, 305, 188	\$71, 789, 008	-0.7
2. Coal mining.....	1, 503	323, 793	308, 581	-4.7	6, 629, 428	6, 407, 360	-3.3
Anthracite.....	160	116, 616	109, 977	-5.7	2, 988, 394	3, 024, 282	+1.2
Bituminous.....	1, 345	207, 177	198, 604	-4.1	3, 641, 034	3, 383, 078	-7.1
3. Metalliferous mining.....	326	42, 095	41, 071	-2.4	1, 026, 772	986, 190	-4.0
4. Quarrying and nonmetal- lic mining.....	758	33, 226	32, 728	-1.5	727, 638	724, 635	-0.4
5. Crude petroleum produc- ing.....	564	25, 474	24, 730	-2.9	880, 279	858, 922	-2.4
6. Public utilities.....	12, 295	701, 643	698, 947	-0.4	21, 365, 145	21, 281, 035	-0.4
Telephone and telegraph.....	8, 049	312, 337	309, 991	-0.8	9, 105, 604	9, 018, 793	-1.0
Power, light, and water.....	3, 710	241, 943	243, 077	+0.5	7, 574, 565	7, 656, 972	+1.1
Electric railroad operation and maintenance, exclu- sive of car shops.....	536	147, 363	145, 879	-1.0	4, 684, 976	4, 605, 270	-1.7
7. Trade.....	12, 097	388, 647	387, 657	-0.3	9, 701, 593	9, 669, 391	-0.3
Wholesale.....	2, 379	70, 122	69, 867	-0.4	2, 169, 315	2, 156, 066	-0.6
Retail.....	9, 718	318, 525	317, 790	-0.2	7, 532, 278	7, 513, 325	-0.3
8. Hotels.....	2, 148	154, 776	149, 433	-3.5	2, 489, 394	2, 426, 001	-2.6
9. Canning and preserving.....	821	36, 939	34, 683	-6.1	634, 262	622, 355	-1.9
10. Laundries.....	442	37, 387	37, 369	-0.2	702, 743	699, 888	-0.4
11. Dyeing and cleaning.....	179	6, 601	6, 669	+1.0	152, 675	153, 111	+0.3
<b>Total.....</b>	<b>46, 031</b>	<b>4, 764, 589</b>	<b>4, 721, 032</b>	<b>-0.9</b>	<b>116, 615, 117</b>	<b>115, 617, 936</b>	<b>-0.9</b>

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION <sup>1</sup>							
New England.....	6, 022	506, 650	504, 249	-0.5	\$12, 082, 227	\$11, 978, 644	-0.8
Middle Atlantic.....	7, 416	1, 411, 145	1, 390, 058	-1.5	36, 414, 151	35, 669, 844	-2.0
East North Central.....	10, 012	1, 301, 388	1, 296, 542	-0.4	34, 183, 599	34, 212, 176	+0.1
West North Central.....	4, 838	300, 312	298, 361	-0.6	7, 263, 176	7, 265, 629	+0.0
South Atlantic.....	4, 800	505, 955	499, 046	-1.4	9, 565, 909	9, 530, 506	-0.4
East South Central.....	2, 439	198, 738	197, 653	-0.5	3, 471, 587	3, 413, 272	-1.7
West South Central.....	3, 425	184, 646	182, 768	-1.0	4, 305, 566	4, 269, 303	-0.8
Mountain.....	1, 672	86, 859	85, 378	-1.7	2, 236, 369	2, 181, 826	-2.4
Pacific.....	5, 407	268, 896	267, 077	-0.7	7, 092, 533	7, 096, 736	+0.1
<b>All divisions.....</b>	<b>46, 031</b>	<b>4, 764, 589</b>	<b>4, 721, 032</b>	<b>-0.9</b>	<b>116, 615, 117</b>	<b>115, 617, 936</b>	<b>-0.9</b>

<sup>1</sup> Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 188. The remaining per cent of change, including total, are unweighted.

<sup>2</sup> Cash payments only; see note 3, p. 200.

<sup>3</sup> *New England:* Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. *Middle Atlantic:* New Jersey, New York, Pennsylvania. *East North Central:* Illinois, Indiana, Michigan, Ohio, Wisconsin. *West North Central:* Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. *South Atlantic:* Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia. *East South Central:* Alabama, Kentucky, Mississippi, Tennessee. *West South Central:* Arkansas, Louisiana, Oklahoma, Texas. *Mountain:* Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming. *Pacific:* California, Oregon, Washington.

<sup>4</sup> Less than one-tenth of 1 per cent.

The per cents of change shown for the total figures represent only the changes in the establishments reporting, as the figures for the several industrial groups are not weighted according to the relative importance of each group.

Increased employment in May was shown in 2 of the 15 industrial groups: Power, light, and water, 0.5 per cent, and dyeing and cleaning, 1.0 per cent.

Decreased employment was reported in May in the remaining 13 groups: Manufacturing, 0.5 per cent; anthracite mining, 5.7 per cent; bituminous coal mining, 4.1 per cent; metalliferous mining, 2.4 per cent; quarrying and nonmetallic mining, 1.5 per cent; crude petroleum producing, 2.9 per cent; telephone and telegraph, 0.8 per cent; electric railroads, 1.0 per cent; wholesale trade, 0.4 per cent; retail trade, 0.2 per cent; hotels, 3.5 per cent; canning and preserving, 6.1 per cent; and laundries, 0.2 per cent.

Pay-roll totals were greater in May, as compared with April, in the two industrial groups reporting increased employment, i. e., power, light, and water, and dyeing and cleaning, and also in the anthracite mining industry. The remaining 12 industrial groups reported decreased earnings ranging from 0.3 per cent in retail trade to 7.1 per cent in bituminous coal mining.

Each of the nine geographic divisions showed a falling off in employment over the month interval, although three divisions—the East and West North Central and Pacific—reported slight increases in pay-roll totals during the same period.

PER CAPITA WEEKLY EARNINGS IN MAY, 1931, AND COMPARISON WITH APRIL, 1931, AND MAY, 1930

Industrial group	Per capita weekly earnings in May, 1931	Per cent of change, May, 1931, compared with—	
		April, 1931	May, 1930
1. Manufacturing.....	\$23.88	-0.7	-10.0
2. Coal mining:			
Anthracite.....	27.50	+7.4	-10.0
Bituminous.....	17.03	-3.2	-23.0
3. Metalliferous mining.....	24.01	-1.7	-19.2
4. Quarrying and nonmetallic mining.....	22.14	+1.0	-16.3
5. Crude petroleum producing.....	34.73	+0.4	+0.3
6. Public utilities:			
Telephone and telegraph.....	29.09	-0.1	+4.1
Power, light, and water.....	31.50	+0.6	(1)
Electric railroads.....	31.57	-0.7	-1.7
7. Trade:			
Wholesale.....	30.86	-0.3	-3.4
Retail.....	23.64	-0.1	-2.7
8. Hotels (cash payments only) <sup>2</sup> .....	16.23	+1.2	-5.6
9. Canning and preserving.....	17.95	+4.4	-1.8
10. Laundries.....	18.76	-0.2	(3)
11. Dyeing and cleaning.....	22.96	-0.7	(3)
Total.....	24.49	+(4)	(3)

<sup>1</sup> No change.

<sup>2</sup> The additional value of board, room, and tips can not be computed.

<sup>3</sup> Data not available.

<sup>4</sup> Less than one-tenth of 1 per cent.

Per capita earnings for May, 1931, given in the preceding table must not be confused with full-time weekly rates of wages; they are actual per capita weekly earnings computed by dividing the total number of employees reported into the total amount of pay roll in the

week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

Comparisons are made with per capita earnings in April, 1931, and with May, 1930, where data are available.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of March and April, 1931, instead of for April and May, 1931, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Mar. 15, 1931	Apr. 15, 1931		March, 1931	April, 1931	
Class I railroads.....	1, 303, 468	1, 315, 371	+0.9	\$181, 744, 757	\$179, 680, 621	-1.2

The total number of employees included in this summary is 6,036,403 whose combined earnings in one week amount to approximately \$157,500,000.

### 1. Employment in Selected Manufacturing Industries in May, 1931

#### Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, April and May, 1931

**E**MPLOYMENT in manufacturing industries in May, 1931, decreased 0.5 per cent as compared with April, and pay-roll totals decreased 1.2 per cent. These changes are based upon returns from 13,876 identical establishments in 54 of the principal manufacturing industries in the United States, having in May 2,858,058 employees whose combined earnings in one week were \$68,237,022.

This seasonal decrease in employment in manufacturing industries in May is slightly less than the average decline shown by the bureau's indexes of employment for previous years. A falling off in employment in May has been shown in six of the eight years prior to 1931, and the decreases, with one exception, have been greater than the decline shown in May, 1931.

The bureau's weighted index of employment for May, 1931, is 74.1, as compared with 74.5 for April, 1931, 74.8 for March, 1931, and 87.7 for May, 1930; the index of pay-roll totals for May, 1931, is 66.6, as compared with 67.4 for April, 1931, 68.5 for March, 1931, and 87.6 for May, 1930. The monthly average for 1926 equals 100.

Increases in both employment and earnings were shown in 5 of the 12 groups of manufacturing industries included in the bureau's indexes; i. e., food, lumber, stone-clay-glass, tobacco, and vehicles. The paper group showed no change in employment and a small decrease in pay roll from April to May, while the miscellaneous



group of industries reported slightly increased earnings coupled with a decrease in employment. The remaining five groups—textiles, iron and steel, leather, chemicals, and nonferrous metals—reported decreased employment and pay-roll totals. An additional group, comprising 10 industries surveyed but not yet included in the bureau's indexes, showed a falling off in employment with increased pay-roll totals.

Gains in employment in May, as compared with April, were shown in 29 of the 64 separate manufacturing industries surveyed, and increased earnings were reported by 31 industries.

The greatest increase in employment over the month interval was a seasonal gain of 8.0 per cent in the woolen and worsted goods industry. Gains of over 5 per cent in employment were reported by the ice cream, automobile tire, and chewing tobacco industries, while the automobile, aircraft, beverage, cement, and brick industries reported increased employment ranging from 3 to 5 per cent. The cotton goods industry reported an increase of 2.3 per cent in number of employees, and the slaughtering and meat-packing industry showed a gain of 1.3 per cent.

The woolen and worsted goods industry, which reported the largest employment gain, also showed the greatest increase in earnings, 10.7 per cent. Increases in pay-roll totals ranging from 6.8 per cent to 5.9 per cent were shown in automobiles, automobile tires, chewing tobacco, cement, and rayon; the ice cream, sawmill, and carriage and wagon industries each reported gains of over 4 per cent in earnings from April to May. Increases in pay-roll totals ranging from 3.6 to 3.9 per cent were shown in the cigar and cigarette, rubber boot and shoe, aircraft, paint and varnish, beet sugar, and beverage industries.

The greatest decrease in employment in May was shown in the fertilizer industry, which reported a seasonal loss of 37.4 per cent. The agricultural implement industry showed 17 per cent fewer employees in May, as compared with April; millinery and lace goods reported a drop of 9.4 per cent, and the radio industry decreased 7.8 per cent in employment over the month interval. Employment in the piano industry declined 5.8 per cent, cane sugar refining and women's clothing reported 5.2 per cent fewer employees, and silk goods and men's clothing reported losses of over 4 per cent in employment. The iron and steel industry reported 2.5 per cent fewer employees, and foundry and machine shop products decreased 2 per cent in employment.

Increased employment and pay-roll totals were shown in the South Atlantic, West South Central, Mountain, and Pacific geographic divisions. The East and West North Central divisions reported practically unchanged employment coupled with slightly increased earnings, and the remaining three divisions—New England, Middle Atlantic, and East South Central—reported decreases in both employment and pay rolls, the greatest decrease in both items occurring in the Middle Atlantic division.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1931, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
<b>Food and kindred products</b>	<b>2,009</b>	<b>219,582</b>	<b>222,111</b>	(1)	<b>\$5,504,260</b>	<b>\$5,586,107</b>	(1)
Slaughtering and meat packing	211	83,235	84,332	+1.3	2,138,821	2,174,930	+1.7
Confectionery	333	34,248	34,481	+0.7	604,141	605,506	+0.2
Ice cream	331	12,705	13,539	+6.6	425,897	443,092	+4.0
Flour	403	15,997	15,689	-1.9	397,563	395,934	-0.4
Baking	716	64,349	65,491	+1.8	1,675,527	1,716,941	+2.5
Sugar refining, cane	15	9,048	8,579	-5.2	262,311	249,704	-4.8
<b>Textiles and their products</b>	<b>2,432</b>	<b>567,965</b>	<b>568,387</b>	(1)	<b>10,166,381</b>	<b>9,896,775</b>	(1)
Cotton goods	505	190,771	195,234	+2.3	2,759,960	2,803,535	+1.6
Hosiery and knit goods	350	87,230	88,115	+1.0	1,459,549	1,495,991	+2.5
Silk goods	258	55,604	52,944	-4.8	1,016,265	945,043	-7.0
Woolen and worsted goods	195	51,813	55,967	+8.0	1,041,283	1,152,526	+10.7
Carpets and rugs	30	18,431	18,647	+1.2	404,294	409,604	+1.3
Dyeing and finishing textiles	130	37,857	36,962	-2.4	921,458	861,318	-6.5
Clothing, men's	350	59,589	57,049	-4.3	1,093,887	951,881	-13.0
Shirts and collars	108	17,527	17,488	-0.2	242,456	242,250	-0.1
Clothing, women's	382	34,252	32,496	-5.2	892,749	772,349	-13.5
Millinery and lace goods	124	14,891	13,485	-9.4	334,480	262,278	-21.4
<b>Iron and steel and their products</b>	<b>1,977</b>	<b>551,010</b>	<b>539,951</b>	(1)	<b>13,738,937</b>	<b>13,067,725</b>	(1)
Iron and steel	189	226,994	221,414	-2.5	6,008,801	5,542,759	-7.8
Cast-iron pipe	45	9,772	9,844	+0.7	218,673	209,632	-4.1
Structural-iron work	178	24,081	23,558	-2.2	589,641	590,112	+0.1
Foundry and machine-shop products	1,077	196,680	192,718	-2.0	4,820,176	4,677,461	-3.0
Hardware	96	27,449	27,135	-1.1	553,824	550,436	-0.6
Machine tools	151	23,333	22,659	-2.9	573,221	557,022	-2.8
Steam fittings and steam and hot-water heating apparatus	105	24,794	23,979	-3.3	568,785	533,471	-6.2
Stoves	136	17,907	17,744	-0.9	404,916	406,832	+0.5
<b>Lumber and its products</b>	<b>1,474</b>	<b>168,323</b>	<b>169,077</b>	(1)	<b>3,003,503</b>	<b>3,060,560</b>	(1)
Lumber, sawmills	684	90,883	91,810	+1.0	1,489,028	1,551,948	+4.2
Lumber, millwork	343	24,642	24,990	+1.4	510,515	525,073	+2.9
Furniture	447	52,798	52,277	-1.0	1,003,960	983,539	-2.0
<b>Leather and its products</b>	<b>449</b>	<b>128,511</b>	<b>125,955</b>	(1)	<b>2,544,958</b>	<b>2,478,207</b>	(1)
Leather	148	24,869	24,767	-0.4	588,563	592,646	+0.7
Boots and shoes	301	103,642	101,188	-2.4	1,956,395	1,885,561	-3.6
<b>Paper and printing</b>	<b>1,737</b>	<b>232,698</b>	<b>232,923</b>	(1)	<b>7,245,578</b>	<b>7,306,552</b>	(1)
Paper and pulp	361	75,014	75,555	+0.7	1,830,888	1,826,273	-0.3
Paper boxes	312	23,695	23,539	-0.7	522,215	519,800	-0.5
Printing, book and job	610	55,768	55,565	-0.4	1,848,557	1,813,767	-1.9
Printing, newspapers	454	78,221	78,264	+0.1	3,043,918	3,046,652	+0.1
<b>Chemicals and allied products</b>	<b>466</b>	<b>103,660</b>	<b>96,769</b>	(1)	<b>2,844,605</b>	<b>2,716,782</b>	(1)
Chemicals	163	36,421	35,754	-1.8	977,524	963,207	-1.5
Fertilizers	207	16,977	10,623	-37.4	282,312	178,199	-36.9
Petroleum refining	96	50,262	50,392	+0.3	1,584,769	1,575,376	-0.6
<b>Stone, clay, and glass products</b>	<b>1,148</b>	<b>111,762</b>	<b>114,419</b>	(1)	<b>2,519,839</b>	<b>2,569,508</b>	(1)
Cement	111	19,603	20,263	+3.4	508,209	539,611	+6.2
Brick, tile, and terra cotta	731	30,823	31,789	+3.1	589,475	603,565	+2.4
Pottery	115	17,897	18,233	+1.9	401,627	392,703	-2.2
Glass	191	43,439	44,134	+1.6	1,020,528	1,033,629	+1.3
<b>Metal products, other than iron and steel</b>	<b>244</b>	<b>47,198</b>	<b>46,784</b>	(1)	<b>1,089,895</b>	<b>1,060,849</b>	(1)
Stamped and enameled ware	82	16,966	16,628	-2.1	370,138	351,458	-5.0
Brass, bronze, and copper products	162	30,212	30,156	-0.2	719,757	709,391	-1.4
<b>Tobacco products</b>	<b>214</b>	<b>57,447</b>	<b>57,905</b>	(1)	<b>821,639</b>	<b>854,579</b>	(1)
Chewing and smoking tobacco and snuff	28	8,144	8,641	+6.1	124,492	132,600	+6.5
Cigars and cigarettes	186	49,303	49,264	-0.1	697,147	721,979	+3.6

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1931, BY INDUSTRIES—Continued

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
<b>Vehicles for land transpor- tation</b> .....	<b>1, 347</b>	<b>419, 833</b>	<b>425, 271</b>	(1)	<b>\$12, 259, 493</b>	<b>\$12, 692, 708</b>	(1)
Automobiles.....	213	290, 590	299, 373	+3. 0	8, 516, 318	9, 092, 805	+6. 8
Carriages and wagons.....	48	782	795	+1. 7	15, 911	16, 602	+4. 3
Car building and repairing, electric-railroad.....	438	27, 937	27, 501	-1. 6	849, 864	831, 335	-2. 2
Car building and repairing, steam-railroad.....	548	100, 524	97, 602	-2. 9	2, 877, 400	2, 751, 966	-4. 4
<b>Miscellaneous industries</b> .....	<b>479</b>	<b>264, 023</b>	<b>259, 406</b>	(1)	<b>7, 056, 288</b>	<b>7, 046, 670</b>	(1)
Agricultural implements.....	76	13, 678	11, 358	-17. 0	297, 480	247, 638	-16. 8
Electrical machinery, appa- ratus, and supplies.....	208	158, 590	155, 040	-2. 2	4, 309, 941	4, 267, 786	-1. 0
Pianos and organs.....	63	5, 345	5, 034	-5. 8	128, 896	111, 750	-13. 3
Rubber boots and shoes.....	10	11, 724	12, 066	+2. 9	194, 626	202, 118	+3. 8
Automobile tires and inner tubes.....	35	38, 677	40, 662	+5. 1	1, 121, 877	1, 196, 257	+6. 6
Shipbuilding.....	87	36, 009	35, 246	-2. 1	1, 003, 468	1, 021, 121	+1. 8
<b>Total—54 industries used in computing index numbers of employment and pay roll</b> .....	<b>13, 876</b>	<b>2, 872, 012</b>	<b>2, 858, 058</b>	(1)	<b>68, 794, 476</b>	<b>68, 237, 022</b>	(1)
<b>Industries added since Feb- ruary, 1929, for which data for the index-base year (1926) are not available</b> .....	<b>1, 020</b>	<b>141, 996</b>	<b>141, 166</b>	(2)	<b>3, 510, 712</b>	<b>3, 551, 986</b>	(2)
Rayon.....	18	22, 694	23, 208	+2. 3	455, 208	481, 917	+5. 9
Radio.....	46	20, 386	18, 801	-7. 8	489, 389	477, 051	-2. 5
Aircraft.....	39	7, 595	7, 840	+3. 2	251, 779	260, 919	+3. 6
Jewelry.....	157	15, 451	14, 953	-3. 2	320, 521	305, 887	-4. 6
Paint and varnish.....	304	16, 857	17, 274	+2. 5	470, 307	487, 134	+3. 6
Rubber goods, other than boots, shoes, tires, and in- ner tubes.....	80	18, 389	18, 503	+0. 6	408, 805	411, 305	+0. 6
Beet sugar.....	61	2, 320	2, 383	+2. 7	74, 078	76, 922	+3. 8
Beverages.....	249	11, 040	11, 419	+3. 4	336, 190	349, 458	+3. 9
Cash registers, adding ma- chines, and calculating machines.....	49	17, 137	16, 814	-1. 9	484, 318	481, 100	-0. 7
Typewriters and supplies.....	17	10, 127	9, 971	-1. 5	220, 117	220, 293	+0. 1
<b>All industries</b> .....	<b>14, 896</b>	<b>3, 014, 008</b>	<b>2, 999, 224</b>	(2)	<b>72, 305, 188</b>	<b>71, 789, 008</b>	(2)

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION <sup>1</sup>							
New England.....	1, 686	362, 050	359, 354	-0. 7	\$8, 010, 894	\$7, 924, 331	-1. 1
Middle Atlantic.....	3, 679	871, 402	858, 086	-1. 5	22, 122, 058	21, 407, 717	-3. 2
East North Central.....	3, 572	950, 048	950, 018	— (4)	25, 030, 692	25, 218, 137	+0. 7
West North Central.....	1, 407	160, 372	160, 158	-0. 1	3, 882, 224	3, 908, 548	+0. 7
South Atlantic.....	1, 837	341, 764	342, 090	+0. 1	6, 049, 311	6, 107, 919	+1. 0
East South Central.....	696	109, 366	109, 005	-0. 3	1, 907, 380	1, 877, 229	-1. 6
West South Central.....	825	88, 762	88, 784	+ (4)	1, 948, 114	1, 956, 865	+0. 4
Mountain.....	311	26, 792	27, 236	+1. 7	701, 065	701, 148	+ (1)
Pacific.....	883	103, 452	104, 493	+1. 0	2, 653, 430	2, 687, 114	+1. 3
<b>All divisions</b> .....	<b>14, 896</b>	<b>3, 014, 008</b>	<b>2, 999, 224</b>	(2)	<b>72, 305, 188</b>	<b>71, 789, 008</b>	(2)

<sup>1</sup> The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

<sup>2</sup> The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting.

<sup>3</sup> See footnote 3, p. 182.

<sup>4</sup> Less than one-tenth of 1 per cent.



TABLE 2.—PER CENT OF CHANGE, APRIL TO MAY, 1931, 12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change, April to May, 1931		Group	Per cent of change, April to May, 1931	
	Number on pay- roll	Amount of pay- roll		Number on pay- roll	Amount of pay- roll
Food and kindred products.....	+1.1	+1.6	Stone, clay, and glass products..	+2.4	+1.8
Textiles and their products.....	-0.4	-3.5	Metal products, other than iron and steel.....	-0.8	-2.4
Iron and steel and their prod- ucts.....	-2.2	-4.8	Tobacco products.....	+0.7	+1.0
Lumber and its products.....	+0.6	+2.0	Vehicles for land transportation..	+0.1	+1.4
Leather and its products.....	-2.0	-2.5	Miscellaneous industries.....	-1.6	+0.1
Paper and printing.....	( <sup>1</sup> )	-0.7			
Chemicals and allied products..	-7.1	-4.7	<b>Total: 54 industries.....</b>	<b>-0.5</b>	<b>-1.1</b>

<sup>1</sup> No change.

#### Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, May, 1931, with May, 1930

THE level of employment in manufacturing industries in May, 1931, was 15.5 per cent below the level of May, 1930, and pay-roll totals were 24 per cent lower.

Each of the 54 industries upon which the bureau's indexes are based had fewer employees and smaller pay-roll totals in May, 1931, than in May, 1930. The agricultural implement industry reported the greatest decrease in employment over the 12-month interval, a decline of 53.6 per cent. Machine tools reported 35.9 per cent fewer employees, carriages and wagons, 34.1 per cent, and sawmills a loss of 29.8 per cent in employment. Foundry and machine-shop products reported a falling off of 26.1 per cent in number of employees over the year period; steam railroad car shops, 25.1 per cent; brick, tile, and terra cotta, 24.2 per cent; and structural-iron work, 24 per cent. The automobile industry showed 18.9 per cent fewer employees in May, 1931, than in May, 1930, the iron and steel industry reported a drop of 18.2 per cent, and the cotton goods industry declined 5.7 per cent. The woolen and worsted goods industry reported the smallest loss in employment over the year period, the May, 1931, index showing a change of less than 1 per cent in number of employees from the level of May, 1930.

Each of the nine geographic divisions showed a falling off in employment and earnings in May, 1931, as compared with May, 1930; the New England division showed the least change in number of employees, a decrease of 10.3 per cent; and the Mountain division reported the largest decrease, 20.5 per cent.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1931, WITH MAY, 1930

The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, May, 1931, compared with May, 1930		Industry	Per cent of change, May, 1931, compared with May, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
<b>Food and kindred products.</b>	-6.7	-10.9	<b>Chemicals and allied products</b>	-13.3	-17.7
Slaughtering and meat packing	-5.4	-8.3	Chemicals	-9.6	-13.6
Confectionery	-2.2	-9.3	Fertilizers	-14.1	-24.9
Ice cream	-14.2	-16.8	Petroleum refining	-17.4	-20.2
Flour	-9.2	-14.4	<b>Stone, clay, and glass products</b>	-17.7	-26.2
Baking	-6.2	-10.7	Cement	-18.8	-25.4
Sugar refining, cane	-18.8	-22.7	Brick, tile, and terra cotta	-24.2	-38.3
<b>Textiles and their products</b>	-7.1	-11.9	Pottery	-5.0	-9.9
Cotton goods	-5.7	-6.6	Glass	-16.1	-21.4
Hosiery and knit goods	-9.5	-11.7	<b>Metal products, other than iron and steel</b>	-14.3	-21.5
Silk goods	-13.9	-20.1	Stamped and enameled ware	-11.3	-16.1
Woolen and worsted goods	-0.9	-5.5	Brass, bronze, and copper products	-15.7	-23.6
Carpets and rugs	-9.8	-2.5	<b>Tobacco products</b>	-9.5	-16.8
Dyeing and finishing textiles	-3.8	-6.3	Chewing and smoking tobacco and snuff	-3.2	-8.5
Clothing, men's	-7.4	-17.4	Cigars and cigarettes	-10.3	-17.8
Shirts and collars	-8.1	-7.7	<b>Vehicles for land transportation</b>	-21.5	-27.7
Clothing, women's	-5.8	-16.5	Automobiles	-18.9	-25.7
Millinery and lace goods	-14.5	-27.5	Carriages and wagons	-34.1	-39.2
<b>Iron and steel and their products</b>	-22.4	-35.4	Car building and repairing, electric-railroad	-12.2	-16.5
Iron and steel	-18.2	-32.5	Car building and repairing, steam-railroad	-25.1	-30.9
Cast-iron pipe	-15.9	-25.8	<b>Miscellaneous industries</b>	-20.9	-30.0
Structural-iron work	-24.0	-36.9	Agricultural implements	-53.6	-64.7
Foundry and machine-shop products	-26.1	-38.8	Electrical machinery, apparatus, and supplies	-19.8	-29.6
Hardware	-17.3	-27.3	Pianos and organs	-17.7	-34.9
Machine tools	-35.9	-47.0	Rubber boots and shoes	-18.7	-39.9
Steam fittings and steam and hot-water heating apparatus	-17.6	-32.1	Automobile tires and inner tubes	-15.0	-22.7
Stoves	-17.0	-26.5	Shipbuilding	-16.8	-23.0
<b>Lumber and its products</b>	-25.4	-37.7	<b>All industries</b>	-15.5	-24.0
Lumber, sawmills	-29.8	-44.4			
Lumber, millwork	-18.0	-29.0			
Furniture	-18.7	-28.6			
<b>Leather and its products</b>	-6.9	-9.0			
Leather	-10.9	-13.7			
Boots and shoes	-5.8	-7.5			
<b>Paper and printing</b>	-7.6	-11.6			
Paper and pulp	-12.7	-21.7			
Paper boxes	-7.3	-10.1			
Printing, book and job	-9.2	-13.9			
Printing, newspapers	-1.3	-3.5			

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION			GEOGRAPHIC DIVISION—contd.		
New England	-10.3	-16.4	West South Central	-19.9	-25.3
Middle Atlantic	-14.9	-24.1	Mountain	-20.5	-19.9
East North Central	-18.7	-27.5	Pacific	-18.6	-27.7
West North Central	-16.4	-21.6	<b>All divisions</b>	-15.5	-24.0
South Atlantic	-11.1	-18.2			
East South Central	-16.7	-24.1			

## Per Capita Earnings in Manufacturing Industries

ACTUAL per capita weekly earnings in May, 1931, for each of the 64 manufacturing industries surveyed by the Bureau of Labor Statistics, together with per cents of change in May, 1931, as compared with April, 1931, and May, 1930, are shown in Table 4.

Per capita earnings in May, 1931, for the combined 54 chief manufacturing industries of the United States, upon which the bureau's indexes of employment and pay rolls are based, were 0.7 per cent less than in April, 1931, and 10 per cent less than in May, 1930.

The actual average per capita weekly earnings in May, 1931, for the 54 manufacturing industries were \$23.88; the average per capita earnings for all of the 64 manufacturing industries surveyed were \$23.94.

Per capita earnings given in Table 4 must not be confused with full-time weekly rates of wages. They are actual per capita weekly earnings computed by dividing the total number of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

TABLE 4.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN MAY, 1931, AND COMPARISON WITH APRIL, 1931, AND MAY, 1930

Industry	Per capita weekly earnings in May, 1931	Per cent of change, May, 1931, compared with—	
		April, 1931	May, 1930
Food and kindred products:			
Slaughtering and meat packing.....	\$25.79	+0.4	-2.8
Confectionery.....	17.56	-0.5	-7.2
Ice cream.....	32.73	-2.4	-2.9
Flour.....	25.24	+1.6	-5.6
Baking.....	26.22	+0.7	-4.7
Sugar refining, cane.....	29.11	+0.4	-4.8
Textiles and their products:			
Cotton goods.....	14.36	-0.8	-0.8
Hosiery and knit goods.....	16.98	+1.5	-2.6
Silk goods.....	17.85	-2.4	-7.3
Woolen and worsted goods.....	20.59	+2.4	-4.7
Carpets and rugs.....	21.97	+0.1	+7.9
Dyeing and finishing textiles.....	23.30	-4.3	-3.0
Clothing, men's.....	16.69	-9.1	-11.2
Shirts and collars.....	13.85	+0.1	+0.5
Clothing, women's.....	23.77	-8.8	-11.8
Millinery and lace goods.....	19.45	-13.4	-15.0
Iron and steel and their products:			
Iron and steel.....	25.03	-5.4	-17.5
Cast-iron pipe.....	21.30	-4.8	-11.7
Structural-iron work.....	25.05	+2.3	-17.2
Foundry and machine-shop products.....	24.27	-1.0	-17.3
Hardware.....	20.29	+0.5	-12.1
Machine tools.....	24.58	+ <sup>(1)</sup>	-17.1
Steam fittings and steam and hot-water heating apparatus.....	22.25	-3.0	-17.6
Stoves.....	22.93	+1.4	-11.2
Lumber and its products:			
Lumber, sawmills.....	16.90	+3.2	-20.9
Lumber, millwork.....	21.01	+1.4	-13.3
Furniture.....	18.81	-1.1	-12.4
Leather and its products:			
Leather.....	23.93	+1.1	-3.3
Boots and shoes.....	18.63	-1.3	-1.9
Paper and printing:			
Paper and pulp.....	24.17	-1.0	-10.6
Paper boxes.....	22.09	+0.2	-2.7
Printing, book and job.....	32.64	-1.5	-5.5
Printing, newspapers.....	38.93	+0.1	-2.1

<sup>1</sup> Less than one-tenth of 1 per cent.



TABLE 4.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN MAY, 1931, AND COMPARISON WITH APRIL, 1931, AND MAY, 1930—Continued

Industry	Per capita weekly earnings in May, 1931	Per cent of change, May, 1931, compared with —	
		April, 1931	May, 1930
Chemicals and allied products:			
Chemicals.....	\$26.94	+0.4	-4.6
Fertilizers.....	16.77	+0.8	-12.5
Petroleum refining.....	31.26	-0.9	-3.7
Stone, clay, and glass products:			
Cement.....	26.63	+2.7	-7.9
Brick, tile, and terra cotta.....	18.99	-0.7	-18.5
Pottery.....	21.54	-4.0	-5.1
Glass.....	23.42	-0.3	-6.2
Metal products, other than iron and steel:			
Stamped and enameled ware.....	21.14	-3.0	-5.6
Brass, bronze, and copper products.....	23.52	-1.3	-9.5
Tobacco products:			
Chewing and smoking tobacco and snuff.....	15.35	+0.4	-5.0
Cigars and cigarettes.....	14.66	+3.7	-8.4
Vehicles for land transportation:			
Automobiles.....	30.37	+3.6	-8.2
Carriages and wagons.....	20.88	+2.6	-7.6
Car building and repairing, electric-railroad.....	30.23	-0.6	-5.1
Car building and repairing, steam-railroad.....	28.20	-1.5	-7.3
Miscellaneous industries:			
Agricultural implements.....	21.80	+0.2	-24.1
Electrical machinery, apparatus, and supplies.....	27.53	+1.3	-12.1
Pianos and organs.....	22.20	-8.0	-21.2
Rubber boots and shoes.....	16.75	+0.9	-26.2
Automobile tires and inner tubes.....	29.42	+1.4	-9.1
Shipbuilding.....	28.97	+3.9	-7.5
Industries added since February, 1929, for which data for the index-base year (1926) are not available:			
Rayon.....	20.77	+3.5	-3.5
Radio.....	25.37	+5.7	-8.8
Aircraft.....	33.28	+0.4	+2.1
Jewelry.....	20.46	-1.4	-15.6
Paint and varnish.....	28.20	+1.1	-4.9
Rubber goods, other than boots, shoes, tires and inner tubes.....	22.23	(2)	-8.4
Beet sugar.....	32.28	+1.1	(3)
Beverages.....	30.60	+0.5	(3)
Cash registers, adding machines, and calculating machines.....	28.61	+1.2	(3)
Typewriters and supplies.....	22.09	+1.6	(3)

<sup>2</sup> No change.<sup>3</sup> Data not available.

## Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to May, 1931, together with the average indexes for each of the years 1923 to 1930, inclusive.

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for May, 1930, and March, April, and May, 1931.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the relative importance of the industries.

TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO MAY, 1931

[Monthly average, 1926=100]

Month	Employment										Pay-roll totals									
	1923	1924	1925	1926	1927	1928	1929	1930	1931		1923	1924	1925	1926	1927	1928	1929	1930	1931	
Jan.....	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	73.1		95.8	98.6	93.9	98.0	94.6	89.6	94.5	87.6	62.3	
Feb.....	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	74.1		99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7	67.0	
Mar.....	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	74.8		104.7	103.5	100.8	103.4	102.0	95.2	103.9	90.8	68.5	
Apr.....	110.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	74.5		105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8	67.4	
May.....	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	74.1		109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6	66.0	
June.....	110.9	95.6	98.0	99.3	97.0	93.1	98.8	85.5	-----		109.3	90.8	95.7	99.7	97.4	94.2	102.8	84.1	-----	
July.....	109.2	92.3	97.2	97.7	95.0	92.2	98.2	81.6	-----		104.3	84.3	93.5	95.2	93.0	91.2	98.2	75.9	-----	
Aug.....	108.5	92.5	97.8	98.7	95.1	93.6	98.6	79.9	-----		103.7	87.2	95.4	98.7	95.0	94.2	102.1	73.9	-----	
Sept.....	108.6	94.3	98.9	100.3	95.8	95.0	99.3	79.7	-----		104.4	89.8	94.4	99.3	94.1	95.4	102.6	74.2	-----	
Oct.....	108.1	95.6	100.4	100.7	95.3	95.9	98.3	78.6	-----		106.8	92.4	100.4	102.9	95.2	99.0	102.3	72.7	-----	
Nov.....	107.4	95.5	100.7	99.5	93.5	95.4	94.8	76.5	-----		105.4	91.4	100.4	99.6	91.6	96.1	95.1	68.3	-----	
Dec.....	105.4	97.3	100.8	98.9	92.6	95.5	91.9	75.1	-----		103.2	95.7	101.6	99.8	93.2	97.7	92.0	67.4	-----	
Av.....	108.8	98.2	99.2	100.0	96.4	93.8	97.5	83.7	74.1		104.3	94.6	97.7	100.0	96.5	94.5	100.8	80.3	66.4	

<sup>1</sup> Average for 5 months.

Following Table 6 are two charts, which represent the 54 separate industries combined and show the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1930, and January to May, 1931, inclusive.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1930, AND MARCH, APRIL, AND MAY, 1931

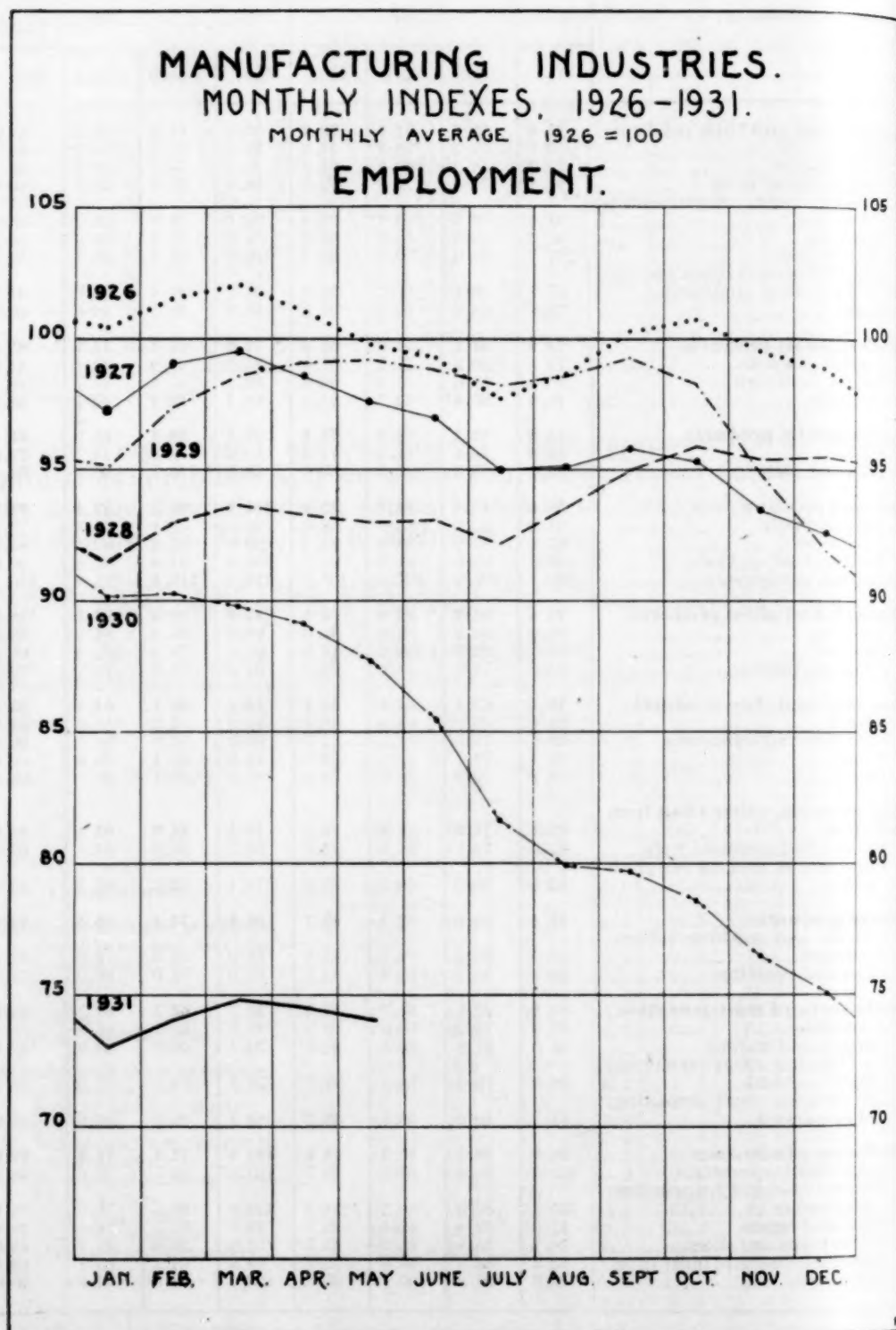
[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1930		1931		1930		1931	
	May	March	April	May	May	March	April	May
<b>General index.....</b>	<b>87.7</b>	<b>74.8</b>	<b>74.5</b>	<b>74.1</b>	<b>87.6</b>	<b>68.5</b>	<b>67.4</b>	<b>64.1</b>
<b>Food and kindred products.....</b>	<b>94.3</b>	<b>87.9</b>	<b>87.0</b>	<b>88.0</b>	<b>98.0</b>	<b>86.9</b>	<b>85.9</b>	<b>87.1</b>
Slaughtering and meat packing.....	95.8	90.2	89.4	90.6	99.9	90.2	90.0	91.6
Confectionery.....	80.4	82.3	78.1	78.6	80.8	77.2	73.2	73.1
Ice cream.....	97.6	76.2	78.5	83.7	99.3	76.9	79.4	82.6
Flour.....	95.0	87.7	87.9	86.3	98.2	85.2	84.4	84.1
Baking.....	97.8	90.6	90.1	91.7	100.4	88.9	87.5	89.7
Sugar refining, cane.....	97.4	82.2	83.5	79.1	102.8	84.5	83.5	79.5
<b>Textiles and their products.....</b>	<b>85.9</b>	<b>81.0</b>	<b>80.1</b>	<b>79.8</b>	<b>78.2</b>	<b>75.4</b>	<b>71.4</b>	<b>68.1</b>
Cotton goods.....	83.9	76.8	77.3	79.1	77.7	69.8	71.4	72.6
Hosiery and knit goods.....	89.9	80.1	80.6	81.4	84.6	73.4	72.9	74.7
Silk goods.....	89.3	83.2	80.7	76.9	83.7	76.2	71.9	66.9
Woolen and worsted goods.....	78.1	76.4	71.7	77.4	76.6	73.0	65.4	72.4
Carpets and rugs.....	86.7	76.1	77.2	78.2	67.1	64.6	64.6	65.4
Dyeing and finishing textiles.....	94.8	95.4	93.5	91.2	90.4	94.5	90.6	84.7
Clothing, men's.....	78.6	77.5	76.1	72.8	61.4	66.2	58.2	50.7
Shirts and collars.....	81.5	74.2	75.1	74.9	67.9	62.4	62.8	62.7
Clothing, women's.....	98.9	98.6	98.3	93.2	86.7	93.8	83.7	72.4
Millinery and lace goods.....	89.5	88.3	84.4	76.5	84.0	86.1	77.7	60.9

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1930, AND MARCH, APRIL, AND MAY, 1931—Continued

Industry	Employment				Pay-roll totals			
	1930	1931			1930	1931		
	May	March	April	May	May	March	April	May
<b>Iron and steel and their products</b>	<b>90.6</b>	<b>72.6</b>	<b>71.9</b>	<b>70.3</b>	<b>89.5</b>	<b>62.0</b>	<b>60.7</b>	<b>57.8</b>
Iron and steel	90.7	76.2	76.2	74.2	92.0	67.8	67.3	62.1
Cast-iron pipe	72.5	58.5	60.6	61.0	75.2	54.6	58.2	55.8
Structural-iron work	95.4	75.4	74.1	72.5	96.3	63.9	60.7	60.8
Foundry and machine-shop products	94.0	72.3	70.9	69.5	92.1	59.9	58.2	56.4
Hardware	82.2	69.3	68.8	68.0	73.2	55.2	53.6	53.2
Machine tools	107.2	72.9	70.8	68.7	102.8	58.3	56.1	54.5
Steam fittings and steam and hot-water heating apparatus	67.7	60.1	57.7	55.8	61.7	47.4	44.7	41.9
Stoves	78.1	64.7	65.4	64.8	68.4	50.3	50.0	50.3
<b>Lumber and its products</b>	<b>73.2</b>	<b>54.1</b>	<b>54.3</b>	<b>54.6</b>	<b>72.2</b>	<b>45.4</b>	<b>44.1</b>	<b>45.0</b>
Lumber, sawmills	73.5	50.3	51.1	51.6	75.2	41.2	40.1	41.8
Lumber, millwork	68.3	55.0	55.2	56.0	69.2	47.6	47.7	49.1
Furniture	75.6	63.4	62.2	61.5	68.2	52.4	49.7	48.7
<b>Leather and its products</b>	<b>85.8</b>	<b>82.3</b>	<b>81.5</b>	<b>79.9</b>	<b>73.1</b>	<b>70.9</b>	<b>68.2</b>	<b>66.5</b>
Leather	86.8	78.4	77.6	77.3	85.5	73.8	73.3	73.8
Boots and shoes	85.6	83.3	82.5	80.6	69.6	70.1	66.8	64.4
<b>Paper and printing</b>	<b>99.6</b>	<b>92.4</b>	<b>92.0</b>	<b>92.0</b>	<b>104.9</b>	<b>94.5</b>	<b>93.4</b>	<b>92.7</b>
Paper and pulp	94.6	82.0	82.0	82.6	96.1	77.1	75.5	75.2
Paper boxes	87.8	81.9	82.0	81.4	90.9	83.0	82.1	81.7
Printing, book and job	100.8	93.0	91.9	91.5	105.6	94.4	92.6	90.9
Printing, newspapers	109.1	107.9	107.6	107.7	114.3	110.4	110.2	110.3
<b>Chemicals and allied products</b>	<b>93.0</b>	<b>82.2</b>	<b>86.8</b>	<b>80.6</b>	<b>97.0</b>	<b>80.6</b>	<b>83.7</b>	<b>79.8</b>
Chemicals	94.0	88.8	86.6	85.0	96.0	87.2	84.1	82.9
Fertilizers	84.9	93.7	116.4	72.9	88.6	78.3	105.4	66.5
Petroleum refining	94.5	71.5	77.9	78.1	99.3	74.8	79.7	79.2
<b>Stone, clay, and glass products</b>	<b>79.1</b>	<b>61.1</b>	<b>63.6</b>	<b>65.1</b>	<b>75.5</b>	<b>53.1</b>	<b>54.7</b>	<b>55.7</b>
Cement	81.4	60.0	63.9	66.1	81.9	53.2	57.6	61.1
Brick, tile, and terra cotta	69.5	47.7	51.1	52.7	63.9	36.8	38.5	39.4
Pottery	86.4	79.1	80.6	82.1	76.6	67.4	70.6	69.0
Glass	88.2	72.2	72.9	74.0	87.8	69.1	68.1	69.0
<b>Metal products, other than iron and steel</b>	<b>82.1</b>	<b>71.3</b>	<b>71.0</b>	<b>70.4</b>	<b>78.5</b>	<b>64.0</b>	<b>63.1</b>	<b>61.6</b>
Stamped and enameled ware	81.5	72.7	73.8	72.3	76.2	67.3	67.3	63.9
Brass, bronze, and copper products	82.4	70.7	69.7	69.5	79.4	62.7	61.5	60.7
<b>Tobacco products</b>	<b>91.4</b>	<b>85.0</b>	<b>82.1</b>	<b>82.7</b>	<b>86.9</b>	<b>72.4</b>	<b>69.5</b>	<b>72.3</b>
Chewing and smoking tobacco and snuff	87.4	92.2	79.8	84.6	86.0	84.3	73.9	78.7
Cigars and cigarettes	91.9	84.1	82.4	82.4	87.0	71.0	69.0	71.5
<b>Vehicles for land transportation</b>	<b>87.0</b>	<b>67.8</b>	<b>68.2</b>	<b>68.3</b>	<b>90.7</b>	<b>63.5</b>	<b>64.7</b>	<b>65.6</b>
Automobiles	97.5	75.2	76.8	79.1	98.9	65.9	68.8	73.5
Carriages and wagons	63.0	37.9	40.8	41.5	70.1	40.9	40.9	42.6
Car building and repairing, electric-railroad	88.5	79.4	78.9	77.7	91.3	79.5	77.9	76.2
Car building and repairing, steam-railroad	77.7	60.6	59.9	58.2	82.3	59.9	59.6	56.9
<b>Miscellaneous industries</b>	<b>98.6</b>	<b>79.4</b>	<b>79.3</b>	<b>78.0</b>	<b>102.8</b>	<b>72.4</b>	<b>71.9</b>	<b>72.0</b>
Agricultural implements	107.0	66.4	59.9	49.7	102.8	53.7	43.6	36.3
Electrical machinery, apparatus, and supplies	105.1	87.0	86.2	84.3	110.9	80.5	78.9	78.1
Planos and organs	47.5	42.4	41.5	39.1	42.1	32.5	31.6	27.4
Rubber boots and shoes	78.1	55.8	61.7	63.5	75.9	34.9	43.9	45.6
Automobile tires and inner tubes	85.3	68.3	69.0	72.5	89.8	63.3	65.1	69.4
Shipbuilding	118.0	97.6	100.3	98.2	125.4	92.3	94.9	96.6

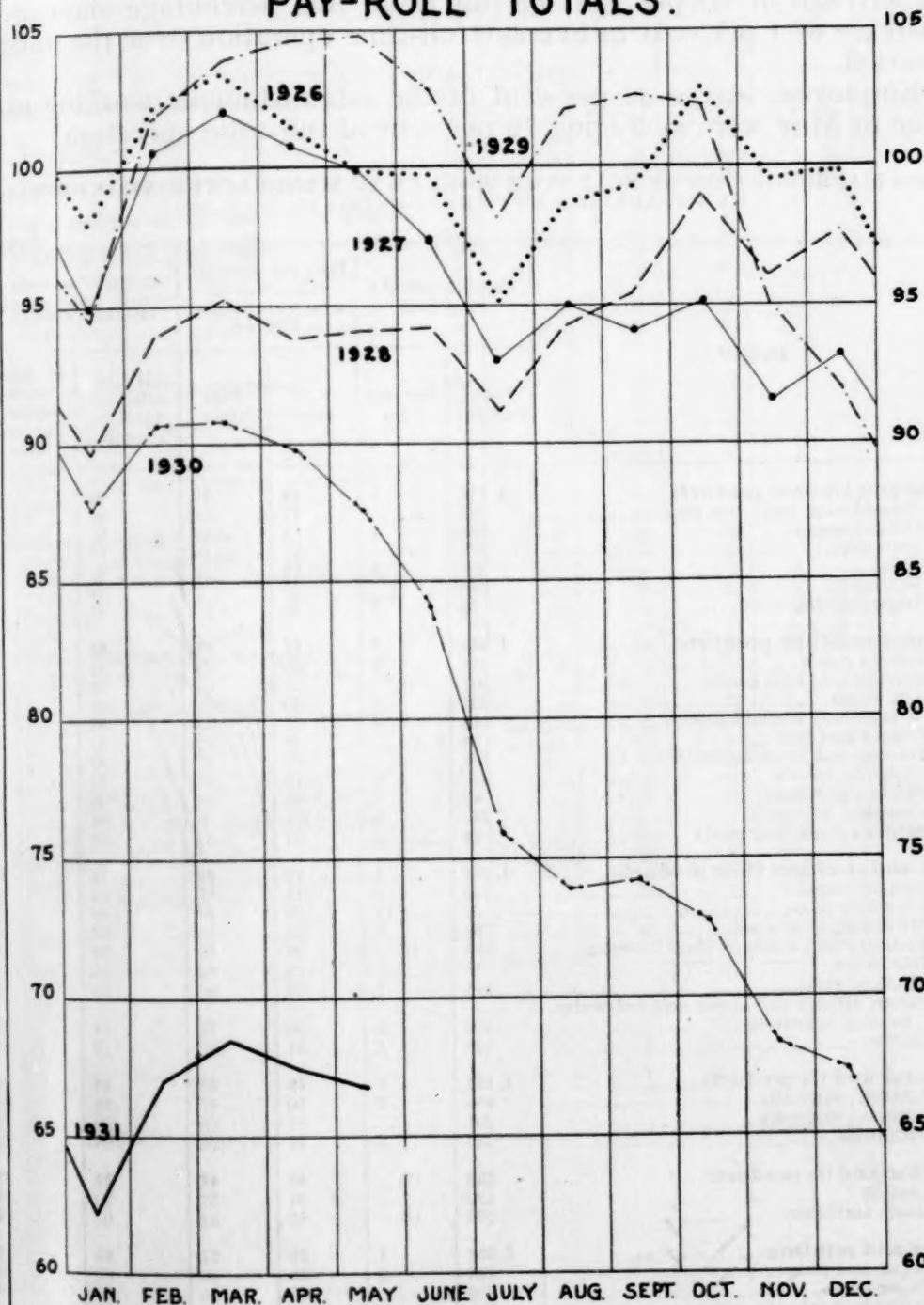




# MANUFACTURING INDUSTRIES. MONTHLY INDEXES, 1926-1931.

MONTHLY AVERAGE 1926 = 100

## PAY-ROLL TOTALS.



## Time Worked in Manufacturing Industries in May, 1931

REPORTS as to working time of employees in May were received from 12,187 establishments in 62 manufacturing industries. One per cent of the establishments were idle, while employees in 60 per cent were working full time, and employees in 39 per cent were working part time.

Employees in the establishments in operation in May were working an average of 90 per cent of full time, this percentage showing a decrease of 1 per cent in average full-time operation over the month interval.

Employees in the 39 per cent of the establishments working part time in May were averaging 76 per cent of full-time operation.

TABLE 7.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN MAY, 1931

Industry	Establishments reporting		Per cent of establishments in which employees worked		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
<b>Food and kindred products</b> .....	<b>1,771</b>	<b>1</b>	<b>80</b>	<b>19</b>	<b>96</b>	<b>90</b>
Slaughtering and meat packing.....	183		78	22	97	88
Confectionery.....	268	1	55	44	91	79
Ice cream.....	276	( <sup>1</sup> )	82	18	97	84
Flour.....	364	3	78	19	95	72
Baking.....	666		93	7	99	80
Sugar refining, cane.....	14	7	36	57	86	77
<b>Textiles and their products</b> .....	<b>1,960</b>	<b>2</b>	<b>67</b>	<b>31</b>	<b>93</b>	<b>77</b>
Cotton goods.....	451	2	65	34	91	75
Hosiery and knit goods.....	301	( <sup>1</sup> )	63	37	91	76
Silk goods.....	233	3	73	24	95	78
Woolen and worsted goods.....	178	2	67	31	94	81
Carpet and rugs.....	24		58	42	91	78
Dyeing and finishing textiles.....	121		63	37	92	78
Clothing, men's.....	255	3	70	27	94	79
Shirts and collars.....	83	6	66	28	95	83
Clothing, women's.....	230	6	71	23	94	76
Millinery and lace goods.....	84		63	37	92	77
<b>Iron and steel and their products</b> .....	<b>1,752</b>	<b>1</b>	<b>30</b>	<b>69</b>	<b>79</b>	<b>70</b>
Iron and steel.....	140	7	48	45	84	66
Cast-iron pipe.....	42	12	29	60	69	55
Structural-iron work.....	165	1	36	63	87	79
Foundry and machine-shop products.....	985	( <sup>1</sup> )	29	70	79	70
Hardware.....	56		18	82	75	70
Machine tools.....	141	1	19	80	75	68
Steam fittings and steam and hot-water heating apparatus.....	100	2	20	78	74	67
Stoves.....	123	1	34	65	79	68
<b>Lumber and its products</b> .....	<b>1,128</b>	<b>2</b>	<b>46</b>	<b>52</b>	<b>85</b>	<b>73</b>
Lumber, sawmills.....	488	3	50	47	86	72
Lumber, millwork.....	291		41	59	86	77
Furniture.....	349	2	44	54	84	70
<b>Leather and its products</b> .....	<b>392</b>	<b>(<sup>1</sup>)</b>	<b>58</b>	<b>42</b>	<b>91</b>	<b>79</b>
Leather.....	120		63	37	92	79
Boots and shoes.....	272	( <sup>1</sup> )	55	44	91	79
<b>Paper and printing</b> .....	<b>1,399</b>	<b>1</b>	<b>72</b>	<b>27</b>	<b>95</b>	<b>87</b>
Paper and pulp.....	193	5	55	40	91	78
Paper boxes.....	259		45	55	89	80
Printing, book and job.....	545		74	26	96	84
Printing, newspapers.....	402		94	6	99	90
<b>Chemicals and allied products</b> .....	<b>352</b>	<b>1</b>	<b>77</b>	<b>22</b>	<b>96</b>	<b>87</b>
Chemicals.....	135	1	66	33	94	82
Fertilizers.....	160	1	80	19	96	81
Petroleum refining.....	57		96	4	100	90

<sup>1</sup> Less than one-half of 1 per cent.



TABLE 7.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN MAY, 1931—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
<b>Stone, clay, and glass products</b> .....	<b>734</b>	<b>6</b>	<b>61</b>	<b>33</b>	<b>91</b>	<b>75</b>
Cement.....	91	3	84	13	97	77
Brick, tile, and terra cotta.....	416	8	56	35	91	75
Pottery.....	100	3	38	59	86	76
Glass.....	127	4	78	18	95	74
<b>Metal products, other than iron and steel</b> .....	<b>209</b>	<b>(1)</b>	<b>41</b>	<b>58</b>	<b>85</b>	<b>74</b>
Stamped and enameled ware.....	68	—	59	41	90	76
Brass, bronze, and copper products.....	141	1	33	67	82	73
<b>Tobacco products</b> .....	<b>203</b>	<b>1</b>	<b>39</b>	<b>59</b>	<b>87</b>	<b>78</b>
Chewing and smoking tobacco and snuff.....	25	—	40	60	83	71
Cigars and cigarettes.....	178	2	39	59	87	79
<b>Vehicles for land transportation</b> .....	<b>1,126</b>	<b>(1)</b>	<b>58</b>	<b>41</b>	<b>92</b>	<b>81</b>
Automobiles.....	169	—	49	51	91	82
Carriages and wagons.....	42	5	60	36	92	77
Car building and repairing, electric-railroad.....	416	—	81	19	98	87
Car building and repairing, steam-railroad.....	499	—	42	58	88	79
<b>Miscellaneous industries</b> .....	<b>420</b>	<b>2</b>	<b>42</b>	<b>56</b>	<b>88</b>	<b>78</b>
Agricultural implements.....	70	3	34	63	80	70
Electrical machinery, apparatus and supplies.....	177	—	29	71	87	82
Pianos and organs.....	50	4	30	66	82	73
Rubber boots and shoes.....	9	—	33	67	84	76
Automobile tires and inner tubes.....	32	—	66	34	94	83
Shipbuilding.....	82	4	78	18	97	83
<b>Industries added in 1929 and 1930</b> .....	<b>741</b>	—	<b>73</b>	<b>27</b>	<b>94</b>	<b>79</b>
Radio.....	44	—	66	34	94	82
Rayon.....	15	—	67	33	95	84
Aircraft.....	36	—	81	19	98	83
Jewelry.....	124	—	37	63	82	72
Paint and varnish.....	228	—	81	91	97	83
Rubber goods, other than boots, shoes, tires, and inner tubes.....	70	—	63	37	93	80
Beverages.....	188	—	89	11	98	83
Cash registers, adding machines, and calculating machines.....	36	—	81	19	97	85
<b>Total</b> .....	<b>12,187</b>	<b>1</b>	<b>60</b>	<b>39</b>	<b>90</b>	<b>76</b>

## 2. Employment in Nonmanufacturing Industries in May, 1931

IN THE following table the bureau presents by geographic divisions the data for 14 nonmanufacturing industries, the totals for which also appear in the summary of employment and pay-roll totals, page 182.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1931, BY INDUSTRIES

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
ANTHRACITE MINING							
Middle Atlantic.....	160	116,616	109,977	-5.7	\$2,988,394	\$3,024,282	+1.2
BITUMINOUS COAL MINING							
Middle Atlantic.....	398	62,652	61,526	-1.8	\$1,098,236	\$1,027,015	-6.5
East North Central.....	160	27,478	25,164	-8.4	506,081	473,230	-6.5
West North Central.....	57	4,912	4,082	-16.9	90,390	68,727	-24.0
South Atlantic.....	330	52,224	50,584	-3.1	885,990	851,962	-3.8
East South Central.....	237	42,848	41,664	-2.8	653,999	615,963	-5.8
West South Central.....	28	1,686	1,660	-1.5	29,369	24,327	-17.2
Mountain.....	123	13,814	12,418	-10.1	333,489	291,038	-12.7
Pacific.....	12	1,563	1,506	-3.6	43,480	30,816	-29.1
All divisions.....	1,345	207,177	198,604	-4.1	3,641,634	3,383,078	-7.1
METALLIFEROUS MINING							
Middle Atlantic.....	7	1,092	1,018	-6.8	\$21,445	\$20,529	-4.3
East North Central.....	49	10,607	10,463	-1.4	208,350	195,122	-6.3
West North Central.....	57	6,232	6,125	-1.7	159,965	153,197	-4.2
East South Central.....	14	2,688	2,666	-0.8	53,169	50,773	-4.5
West South Central.....	61	2,444	2,095	-14.3	45,060	36,320	-19.4
Mountain.....	106	16,905	16,538	-2.2	475,976	467,703	-1.7
Pacific.....	32	2,127	2,166	+1.8	62,807	62,546	-0.4
All divisions.....	326	42,095	41,071	-2.4	1,026,772	986,190	-4.0
QUARRYING AND NONMETALLIC MINING							
New England.....	104	4,391	4,290	-2.3	\$121,199	\$116,400	-4.4
Middle Atlantic.....	117	6,413	6,673	+4.1	156,745	163,614	+4.8
East North Central.....	216	8,082	7,744	-4.2	193,532	195,003	+0.2
West North Central.....	72	1,949	1,986	+1.9	41,134	42,433	+3.0
South Atlantic.....	99	5,422	5,293	-2.4	88,207	83,814	-5.5
East South Central.....	61	3,349	3,161	-5.6	43,330	42,706	-1.4
West South Central.....	45	2,332	2,340	+0.3	48,003	47,689	-0.7
Mountain.....	4	60	96	+60.0	2,282	2,367	+3.7
Pacific.....	40	1,228	1,145	-6.8	33,206	30,609	-7.8
All divisions.....	758	33,226	32,728	-1.5	727,638	724,635	-0.4
CRUDE PETROLEUM PRODUCING							
Middle Atlantic.....	43	785	773	-1.5	\$19,373	\$19,025	-1.8
East North Central.....	5	29	28	-3.4	597	552	-7.5
West North Central.....	23	114	108	-5.3	2,408	2,241	-6.9
South Atlantic.....	15	405	416	+2.7	11,629	11,234	-3.4
East South Central.....	5	212	210	-0.9	4,285	4,494	+4.9
West South Central.....	369	17,962	17,457	-2.8	621,292	608,487	-2.1
Mountain.....	20	274	278	+1.5	9,132	9,466	+3.7
Pacific.....	84	5,693	5,460	-4.1	211,563	203,423	-3.8
All divisions.....	564	25,474	24,730	-2.9	880,279	858,922	-2.4

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1931, BY INDUSTRIES—Continued

Geographic division	Estab- lish- ments	Number on pay roll		Percent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
TELEPHONE AND TELEGRAPH							
New England.....	720	27, 201	27, 406	+0. 8	\$868, 034	\$862, 279	-0. 7
Middle Atlantic.....	1, 232	100, 491	99, 666	-0. 8	3, 270, 639	3, 253, 701	-0. 5
East North Central.....	1, 459	70, 841	69, 605	-1. 7	1, 960, 801	1, 914, 869	-2. 3
West North Central.....	1, 370	28, 857	28, 876	+0. 1	724, 520	719, 673	-0. 7
South Atlantic.....	560	20, 329	20, 063	-1. 3	560, 346	550, 846	-1. 7
East South Central.....	621	10, 060	9, 963	-1. 0	224, 249	223, 366	-0. 4
West South Central.....	692	17, 239	17, 121	-0. 7	396, 950	391, 354	-1. 4
Mountain.....	482	7, 172	7, 214	+0. 6	177, 311	177, 166	-0. 1
Pacific.....	913	30, 147	30, 077	-0. 2	922, 754	925, 539	+0. 3
All divisions.....	8, 049	312, 337	309, 991	-0. 8	9, 105, 604	9, 018, 793	-1. 0
POWER, LIGHT, AND WATER							
New England.....	268	22, 186	22, 391	+0. 9	\$714, 302	\$714, 558	+(1)
Middle Atlantic.....	318	59, 100	60, 433	+2. 3	1, 956, 130	2, 000, 585	+2. 3
East North Central.....	657	55, 883	55, 575	-0. 6	1, 806, 458	1, 817, 483	+0. 6
West North Central.....	431	27, 412	27, 406	-(1)	791, 515	802, 211	+1. 4
South Atlantic.....	288	23, 424	23, 290	-0. 6	712, 135	718, 277	+0. 9
East South Central.....	175	6, 539	6, 981	+6. 8	163, 332	173, 128	+6. 0
West South Central.....	613	17, 753	17, 360	-2. 2	486, 686	477, 960	-1. 8
Mountain.....	123	6, 103	6, 101	-(1)	182, 973	186, 126	+1. 7
Pacific.....	837	23, 543	23, 540	-(1)	761, 034	766, 644	+0. 7
All divisions.....	3, 710	241, 943	243, 077	+0. 5	7, 574, 565	7, 636, 972	+1. 1
ELECTRIC RAILROADS <sup>2</sup>							
New England.....	49	13, 509	13, 671	+1. 2	\$484, 422	\$489, 548	+1. 1
Middle Atlantic.....	159	37, 108	37, 122	+(1)	1, 215, 109	1, 189, 161	-2. 1
East North Central.....	108	44, 606	43, 225	-3. 1	1, 452, 970	1, 396, 088	-3. 9
West North Central.....	68	13, 402	13, 295	-0. 8	402, 396	405, 394	+0. 7
South Atlantic.....	51	11, 740	11, 660	-0. 7	330, 935	328, 021	-0. 9
East South Central.....	11	3, 436	3, 423	-0. 4	93, 421	94, 371	+1. 0
West South Central.....	37	5, 225	5, 186	-0. 7	139, 525	139, 298	-0. 2
Mountain.....	15	1, 985	2, 009	+1. 2	53, 358	54, 446	+2. 0
Pacific.....	38	16, 352	16, 288	-0. 4	512, 840	508, 943	-0. 8
All divisions.....	536	147, 363	145, 879	-1. 0	4, 684, 976	4, 605, 270	-1. 7
WHOLESALE TRADE							
New England.....	587	13, 399	13, 520	+0. 9	\$415, 536	\$417, 580	+0. 5
Middle Atlantic.....	308	9, 333	9, 321	-0. 1	309, 848	305, 826	-1. 3
East North Central.....	293	11, 657	11, 697	+0. 3	361, 265	359, 646	-0. 4
West North Central.....	223	12, 945	12, 798	-1. 1	377, 341	375, 255	-0. 6
South Atlantic.....	193	3, 502	3, 486	-0. 5	102, 669	102, 393	-0. 3
East South Central.....	65	1, 766	1, 762	-0. 2	47, 717	47, 410	-0. 6
West South Central.....	293	6, 038	5, 950	-1. 5	175, 213	172, 406	-1. 6
Mountain.....	80	1, 823	1, 796	-1. 5	61, 542	60, 097	-2. 3
Pacific.....	337	9, 659	9, 537	-1. 3	318, 184	315, 453	-0. 9
All divisions.....	2, 379	70, 122	69, 867	-0. 4	2, 169, 315	2, 156, 066	-0. 6
RETAIL TRADE							
New England.....	2, 378	51, 161	51, 436	+0. 5	\$1, 238, 662	\$1, 236, 108	-0. 2
Middle Atlantic.....	392	79, 954	79, 529	-0. 5	2, 045, 957	2, 053, 517	+0. 4
East North Central.....	2, 751	76, 611	77, 029	+0. 5	1, 849, 824	1, 832, 117	-1. 0
West North Central.....	696	21, 460	21, 029	-2. 0	444, 192	441, 340	-0. 6
South Atlantic.....	1, 064	21, 311	21, 209	-0. 5	463, 703	468, 163	+1. 0
East South Central.....	370	8, 112	8, 476	+4. 5	151, 127	153, 142	+1. 3
West South Central.....	237	13, 136	12, 848	-2. 2	261, 129	262, 308	+0. 5
Mountain.....	208	5, 269	5, 046	-4. 2	114, 999	107, 008	-6. 9
Pacific.....	1, 622	41, 511	41, 188	-0. 8	962, 685	959, 622	-0. 3
All divisions.....	9, 718	318, 525	317, 790	-0. 2	7, 532, 278	7, 513, 325	-0. 3

See footnotes at end of table.



TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1931, BY INDUSTRIES—Continued

Geographic division	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
HOTELS <sup>1</sup>							
New England.....	113	88,001	8,206	+2.6	\$132,047	\$134,942	+2.2
Middle Atlantic.....	400	46,189	45,861	-0.7	791,432	794,230	+0.4
East North Central.....	412	32,133	32,279	+0.5	552,602	546,418	-1.1
West North Central.....	297	15,458	15,283	-1.1	214,383	215,851	+0.7
South Atlantic.....	202	16,601	12,167	-26.7	223,027	176,246	-21.0
East South Central.....	101	6,111	6,240	+2.1	72,237	73,344	+1.5
West South Central.....	157	9,614	9,438	-1.8	125,613	121,739	-3.1
Mountain.....	113	3,588	3,603	+0.4	60,023	60,683	+1.1
Pacific.....	353	17,081	16,456	-3.7	318,030	302,548	-4.9
All divisions.....	2,148	154,776	149,433	-3.5	2,489,394	2,426,001	-2.5
CANNING AND PRESERVING							
New England.....	60	1,982	1,187	-40.1	\$37,502	\$22,587	-39.8
Middle Atlantic.....	86	7,282	7,220	-0.9	151,507	140,236	-7.4
East North Central.....	226	6,834	7,196	+5.3	127,715	132,634	+3.9
West North Central.....	49	1,426	1,554	+9.0	25,355	26,762	+5.5
South Atlantic.....	91	3,715	3,185	-14.3	45,102	38,742	-14.1
East South Central.....	31	1,304	1,120	-14.1	13,987	14,201	+1.5
West South Central.....	37	1,017	1,047	+2.9	5,972	7,398	+23.9
Mountain.....	49	959	985	+2.7	25,108	26,904	+7.2
Pacific.....	192	12,420	11,189	-9.9	202,014	212,931	+5.4
All divisions.....	4821	36,939	34,683	-6.1	634,262	622,395	-1.9
LAUNDRIES							
New England.....	44	2,350	2,374	+1.0	\$47,971	\$49,076	+2.3
Middle Atlantic.....	91	11,235	11,321	+0.8	229,476	231,266	+0.8
East North Central.....	83	5,731	5,641	-1.6	111,264	109,931	-1.2
West North Central.....	61	4,910	4,824	-1.8	87,990	85,470	-2.9
South Atlantic.....	42	4,657	4,744	+1.9	76,593	76,607	+0.0
East South Central.....	32	2,161	2,167	+0.3	28,360	28,252	-0.4
West South Central.....	17	1,108	1,134	+2.3	15,963	16,057	+0.6
Mountain.....	20	1,849	1,803	-2.5	32,441	31,385	-3.3
Pacific.....	52	3,386	3,301	-2.5	72,685	71,844	-1.2
All divisions.....	442	37,387	37,309	-0.2	702,743	699,888	-0.4
DYEING AND CLEANING							
New England.....	13	420	414	-1.4	11,658	11,235	-3.6
Middle Atlantic.....	26	1,493	1,532	+2.6	37,802	39,140	+3.5
East North Central.....	21	848	878	+3.5	21,448	20,946	-2.3
West North Central.....	27	863	837	-3.0	19,363	18,527	-4.3
South Atlantic.....	28	861	859	-0.2	16,262	16,282	+0.1
East South Central.....	20	786	815	+3.7	14,994	14,893	-0.7
West South Central.....	14	330	348	+5.5	6,677	7,095	+6.3
Mountain.....	18	266	255	-4.1	6,670	6,289	-5.7
Pacific.....	12	734	731	-0.4	17,801	18,704	+5.1
All divisions.....	179	6,601	6,669	+1.0	152,675	153,111	+0.3

<sup>1</sup> Less than one-tenth of 1 per cent.<sup>2</sup> Not including car building and repairing; see manufacturing industries, p. 186 et seq.<sup>3</sup> The amount of pay roll given represents cash payments only; the additional value of board, room, and tips can not be computed.<sup>4</sup> Included in the total of 821 establishments reporting in May were 23 establishments which were closed in April but had resumed operation in May and 14 establishments which were operating in April and reported a seasonal closing in May, 1931. There were also 321 additional canning establishments whose reports were not included in the total number of reporting establishments, as the plants had been seasonally closed for a period of 2 or more months.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN **NONMANUFACTURING** INDUSTRIES, MAY, 1931, WITH MAY, 1930

Industry	Per cent of change, May, 1931, compared with May, 1930		Industry	Per cent of change, May, 1931, compared with May, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Anthracite mining.....	-14.4	-23.0	Electric railroads.....	-9.8	-11.4
Bituminous coal mining.....	-8.8	-29.8	Wholesale trade.....	-10.0	-13.0
Metalliferous mining.....	-28.7	-42.4	Retail trade.....	-7.0	-9.6
Quarrying and nonmetallic mining.....	-17.4	-30.9	Hotels.....	-5.6	-10.9
Crude petroleum producing.....	-24.5	-24.2	Canning and preserving.....	-14.8	-16.3
Telephone and telegraph.....	-12.3	-8.8	Laundries.....	(1)	(1)
Power, light, and water.....	-5.6	-5.6	Dyeing and cleaning.....	(1)	(1)

<sup>1</sup> Data not available.

### Indexes of Employment and Pay-Roll Totals for Nonmanufacturing Industries

TABLE 3 shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, crude petroleum producing, telephone and telegraph, power, light, and water, electric railroads, wholesale and retail trade, hotels, and canning and preserving, by months, from January, 1930, to May, 1931, with the monthly average for 1929 as 100.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS FOR NONMANUFACTURING INDUSTRIES, JANUARY, 1930, TO MAY, 1931

[Monthly average, 1929=100]

Year and month	Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and non-metallic mining		Crude petroleum producing		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads <sup>1</sup>		Wholesale trade		Retail trade		Hotels		Canning and pre-serving	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
<b>1930</b>																								
January	102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	92.7	94.0	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3
February	106.9	121.5	102.4	102.1	92.3	92.5	79.8	73.5	90.8	88.6	100.2	101.9	98.8	100.4	95.1	95.7	98.7	98.3	94.4	96.0	102.4	103.8	45.7	51.5
March	82.6	78.5	98.6	86.4	90.9	90.8	83.0	80.0	89.3	91.3	99.4	105.8	99.7	102.1	94.4	95.4	97.7	99.7	93.9	95.5	102.4	104.4	49.7	50.8
April	84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	86.6	86.6	98.9	103.4	100.7	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.1	100.3	74.8	72.6
May	93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	89.8	85.4	99.7	103.2	103.4	104.5	95.2	96.0	96.8	97.4	96.7	97.3	98.0	98.4	65.7	66.9
June	90.8	94.3	88.4	75.6	84.6	81.6	90.3	90.9	90.2	87.1	99.8	103.4	104.6	107.8	94.8	97.0	96.5	98.6	93.9	96.8	98.0	98.1	83.0	81.5
July	91.6	84.0	88.0	68.9	80.5	71.9	89.9	75.5	89.9	88.5	100.0	106.6	105.9	106.7	95.3	95.6	96.0	96.0	89.0	91.7	101.3	99.8	126.3	112.7
August	80.2	78.8	89.2	71.1	79.0	71.0	89.3	85.8	87.7	86.0	98.8	102.5	106.4	106.6	92.9	92.1	95.0	93.6	85.6	87.6	101.5	98.6	185.7	172.0
September	93.8	91.6	90.5	74.9	78.1	69.9	87.7	82.5	85.0	84.0	96.8	102.2	105.2	106.1	91.8	90.5	94.8	93.6	92.0	92.4	100.1	97.1	246.6	214.8
October	99.0	117.2	91.8	79.4	77.2	68.6	84.7	79.3	85.2	82.6	94.5	100.9	104.8	105.6	91.0	88.9	94.2	92.9	95.5	95.1	97.5	95.5	164.7	140.0
November	97.2	98.0	92.5	79.1	72.8	63.4	78.3	66.8	83.6	80.0	93.0	97.9	103.4	103.7	89.3	87.7	92.6	91.0	98.4	96.8	95.2	93.6	96.7	82.9
December	99.1	100.0	92.5	77.7	70.1	59.9	70.2	59.9	77.4	77.2	91.6	101.3	103.2	106.3	88.8	88.6	92.0	91.3	115.1	107.7	93.5	91.5	61.6	57.4
Average	93.4	95.3	93.4	81.3	83.2	78.0	84.3	79.3	87.4	85.9	97.9	102.9	103.0	104.3	93.4	93.5	96.0	95.9	95.9	96.2	99.2	98.5	103.9	96.1
<b>1931</b>																								
January	90.6	89.3	93.9	73.3	68.3	55.0	64.4	50.4	74.8	71.5	90.5	96.3	99.2	98.6	86.9	85.6	89.5	87.5	90.0	89.4	95.0	91.0	48.9	46.1
February	89.5	101.9	91.5	68.3	65.3	54.6	66.6	54.4	73.2	70.0	89.2	94.8	97.8	99.7	86.6	87.1	88.2	88.4	87.1	86.7	96.8	93.7	48.3	48.6
March	82.0	71.3	88.8	65.2	63.5	52.8	70.0	58.2	72.2	73.2	88.6	97.9	96.7	102.4	86.4	88.1	87.4	89.1	87.8	87.5	96.8	93.4	53.0	50.3
April	85.2	75.2	85.9	58.6	63.9	51.4	76.1	62.6	69.8	66.3	88.1	95.0	97.1	97.6	86.8	86.6	87.4	85.2	90.1	88.3	95.9	89.9	59.6	57.1
May	80.3	76.1	82.4	54.4	62.4	49.3	75.0	62.3	67.8	64.7	87.4	94.1	97.6	98.7	85.9	85.1	87.1	84.7	89.9	88.0	92.5	87.7	56.0	56.0

<sup>1</sup> Not including electric-railroad car building and repairing; see vehicles group, manufacturing industries, p. 187<sup>2</sup> Revised.



### Employment in Building Construction

**E**MPLOYMENT in building construction in May, 1931, increased 4.3 per cent as compared with April, and pay-roll totals increased 2.4 per cent, according to reports received from 3,072 firms, having in May 46,002 employees whose earnings in one week were \$1,418,269.

Reports concerning employment and earnings in the building-construction industry are now being secured by this bureau from contractors in 11 cities and their suburbs, and three cooperating State bureaus which supply information concerning construction in their respective States. Reports covering nine additional cities were secured by this bureau for the pay period nearest May 15, but as comparable information for the previous month is not available, these additional cities will not be included in the bureau's tabulations until information for two consecutive months is available from identical firms.

The following table shows the localities covered, the number of identical firms reporting for both months, the number of employees and amount of earnings for one week in April and in May, 1931, together with the per cent of change over the month interval.

COMPARISON OF EMPLOYMENT AND PAY ROLL IN BUILDING CONSTRUCTION  
APRIL AND MAY, 1931, BY LOCALITY

Locality	Number of establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1931	May, 1931		April, 1931	May, 1931	
Atlanta.....	105	1,517	1,745	+15.0	\$29,427	\$35,686	+21.3
Dallas.....	96	1,496	1,491	-0.3	42,363	39,320	-7.2
Denver.....	159	1,182	1,213	+2.6	33,283	34,192	+2.7
Des Moines.....	51	672	823	+22.5	20,169	27,165	+34.7
Minneapolis.....	229	2,979	3,293	+10.5	92,574	100,504	+8.6
New Orleans.....	107	2,025	2,289	+13.0	41,452	47,735	+15.2
Omaha.....	104	837	861	+2.9	23,449	23,917	+2.0
Providence.....	221	2,542	2,447	-3.7	80,055	77,369	-3.4
St. Louis.....	454	4,303	4,489	+4.3	166,478	158,103	-5.0
Seattle.....	173	2,642	2,619	-0.9	81,166	83,878	+3.3
Washington, D. C.....	458	8,236	9,001	+9.3	269,260	280,885	+4.3
Baltimore <sup>1</sup> .....	69	1,901	1,778	-6.5	42,655	43,783	+2.6
Massachusetts <sup>1</sup> .....	773	11,286	11,321	+0.3	398,426	376,231	-5.6
Wisconsin <sup>1</sup> .....	73	2,477	2,632	+6.2	64,264	69,501	+8.1
Total.....	3,072	44,095	46,002	+4.3	1,385,021	1,418,269	+2.4

<sup>1</sup> Data collected and furnished by State bureau.

The total number of employees and earnings shown in the foregoing building-construction report have not been included in the summary table of all industrial groups, page 182. The significance of the trend of employment and earnings in the building-construction industry, if represented by these totals, would not be reflected in proportion to the relative importance of the building industry in the combined total of all industrial groups, due to the fact that the several industrial groups are not weighted, and the building-construction report has not yet attained sufficient volume to represent its proportionate part of the summary total.

# Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to April, 1931, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO APRIL, 1931

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3	73.7
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.3
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.3
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	73.3
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	73.3
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	73.3
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	73.3
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	73.3
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	73.3
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	73.3
Average	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	73.3

<sup>1</sup> Average for 4 months.

Table 2 shows the total number of employees on the 15th day each of April, 1930, and March and April, 1931, and pay-roll totals for the entire months.

In these tabulations data for the occupational group reported as “executives, officials, and staff assistants” are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, APRIL, 1930 AND MARCH AND APRIL, 1931

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	April, 1930	March, 1931	April, 1931	April, 1930	March, 1931	April, 1931
Professional, clerical, and general	261,208	232,325	230,359	\$38,531,351	\$34,512,272	\$34,109,960
Clerks	145,872	127,011	125,828	20,338,009	17,791,296	17,525,507
Stenographers and typists	24,220	21,703	21,514	3,202,695	2,867,003	2,845,479
Maintenance of way and structures	376,604	269,047	290,569	36,020,163	25,492,320	27,060,604
Laborers, extra gang and work train	57,173	24,708	31,228	4,404,226	1,754,802	2,200,229
Laborers, track and roadway section	192,852	140,287	153,036	14,157,525	9,593,712	10,534,865
Maintenance of equipment and stores	424,047	367,593	362,654	58,110,814	47,455,024	46,085,499
Carmen	90,727	76,358	75,677	14,135,372	11,016,008	10,780,323
Machinists	52,402	47,988	47,473	8,606,878	7,286,742	7,055,912
Skilled trades helpers	93,287	80,763	79,601	10,924,330	8,754,144	8,450,424
Laborers (shops, engine houses, power plants, and stores)	34,969	30,170	29,655	3,334,589	2,843,957	2,712,074
Common laborers (shops, engine houses, power plants, and stores)	47,572	39,358	38,821	3,877,879	2,985,670	2,925,200

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, March to April, 1931		State, and industry group	Per cent of change, April to May, 1931	
	Employment	Pay roll		Employment	Pay roll
<b>California—Continued</b>			<b>Maryland—Continued</b>		
Foods, beverages, and tobacco.....	+12.3	+5.7	Chemicals and allied products.....	-14.5	-16.4
Motion pictures.....	-16.2	-31.2	Stone, clay, and glass products.....	+3	+1
Miscellaneous.....	+4.9	+2.3	Metal products, other than iron and steel.....	-5.0	-12.7
All industries.....	+2.7	-2.6	Tobacco products.....	+9	-2.7
<b>Illinois</b>			Transportation equipment.....	+3.1	+22.6
Stone, clay, and glass products.....	+2.2	+4.8	Car building and repairing.....	-7	-4.2
Metals, machinery, and conveyances.....	-2.1	-2.0	Miscellaneous.....	-5.7	-3.9
Wood products.....	+6	-2.5	All manufacturing.....	-4	-1.5
Furs and leather goods.....	+2.3	+1.3	Retail establishments.....	-4.1	+2.7
Chemicals, oils, paints, etc.....	+5	-3.3	Wholesale establishments.....	+1.7	+2
Printing and paper goods.....	-2.4	-1.9	Public utilities.....	-1.2	-1.1
Textiles.....	+1.7	-2.6	Coal mines.....	-9	-12.5
Clothing and millinery.....	-2.7	-28.9	Hotels.....	-5.9	-3.4
Foods, beverages, and tobacco.....	-5	+4	Quarries.....	+11.1	+7.7
Miscellaneous.....	+30.8	+44.0	Building construction.....	-4.9	+1.6
All manufacturing.....	-1.3	-2.7	Laundries.....	-2.4	+2.5
Trade, wholesale and retail services.....	-5	+1.2	Cleaning and dyeing establishments.....	+2.5	+8.1
Public utilities.....	+9	+7.0	Employment—index numbers (1927=100)		
Coal mining.....	-2.2	-18.9			
Building and contracting.....	+29.3	+30.6	March, 1931	April, 1931	
All nonmanufacturing.....	+7	+4.5			
All industries.....	-5	+2			
<b>Iowa</b>			<b>Massachusetts</b>		
April to May, 1931			Boot and shoe cut stock and findings.....	88.3	86.0
Food and kindred products.....	+7	-----	Boots and shoes.....	76.1	73.9
Textiles.....	+5.3	-----	Bread and other bakery products.....	99.0	99.2
Iron and steel works.....	-5.5	-----	Clothing, men's.....	62.2	62.1
Lumber products.....	-1.8	-----	Clothing, women's.....	102.1	99.6
Leather products.....	-2.3	-----	Confectionery.....	88.2	84.6
Paper products, printing and publishing.....	+1	-----	Cotton goods.....	53.8	59.2
Patent medicines, chemicals, and compounds.....	-1.3	-----	Dyeing and finishing textiles.....	95.7	96.6
Stone and clay products.....	+3.7	-----	Electrical machinery, apparatus, and supplies.....	70.2	68.9
Tobacco and cigars.....	+4	-----	Foundry and machine-shop products.....	86.0	85.7
Railway-car shops.....	+1	-----	Furniture.....	74.4	72.5
Various industries.....	+1	-----	Hosiery and knit goods.....	67.1	68.0
All industries.....	-8	-----	Leather, tanned, curried, and finished.....	95.2	93.1
<b>Maryland</b>			Paper and wood pulp.....	83.6	82.2
Food products.....	+3	-2.3	Printing and publishing.....	97.6	97.1
Textiles.....	+3.0	-3.8	Rubber footwear.....	33.4	55.5
Iron and steel, and their products.....	-3	+9	Rubber goods, tires, and tubes.....	60.8	59.1
Lumber and its products.....	+7.8	+4.7	Silk goods.....	81.7	70.4
Leather and its products.....	-3	+3.9	Textile machinery and parts.....	64.0	61.3
Rubber tires.....	-6.1	-17.1	Woolen and worsted goods.....	67.9	65.4
Paper and printing.....	-0.9	-2.7	All industries.....	71.9	72.2

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, March to April, 1931		State, and industry group	Per cent of change, April to May, 1931	
	Employment	Pay roll		Employment	Pay roll
<b>Michigan</b>			<b>New York—Continued</b>		
Paper and printing.....	+0.8	-9.1	Metals, etc.—Continued.		
Chemicals and allied products.....	-9.3	-20.3	Cooking, heating, and ventilating apparatus.....	+1.0	-3.7
Stone, clay, and glass products.....	-27.3	-40.0	Machinery, including electrical apparatus.....	-1.8	+5.5
Metal products, not iron and steel.....	-13.0	-27.0	Automobiles, carriages, and airplanes.....	+6	-2.2
Iron and steel products.....	+9	-11.1	Railroad equipment and repair.....	-1.0	+1
Lumber and its products.....	+5	-2.6	Boat and ship building.....	-17.9	-22.9
Leather and its products.....	-2.9	-8.5	Instruments and appliances.....	-2.6	-8
Food and kindred products.....	-2.8	-1.9	Wood manufactures.....	-2.9	-4.9
Textiles and their products.....	-1.8	-2.5	Saw and planing mills.....	+3.5	+5.4
Tobacco products.....	-2.0	-16.8	Furniture and cabinet-work.....	-6.4	-9.0
Vehicles for land transportation.....	+1.3	+4.4	Pianos and other musical instruments.....	-7.2	-15.8
Miscellaneous.....	+2.8	-6.5	Miscellaneous wood.....	-2	-9
All industries.....	+1	+2	Furs, leather, and rubber goods.....	-2.7	-3.3
<b>New Jersey</b>			Leather.....	-9	+3.3
Food and kindred products.....	-1.3	-1.0	Furs and fur goods.....	+2.8	+6.4
Textiles and their products.....	-9.3	-10.8	Shoes.....	-8	-1.0
Iron and steel and their products.....	-1.1	-4	Other leather and canvas goods.....	-15.5	-20.5
Lumber and its products.....	+1.3	-5.9	Rubber and gutta-percha.....	-2.0	-6.8
Leather and its products.....	+8	-4.0	Pearl, horn, bone, etc.....	-3.4	-2.8
Tobacco products.....	-1.5	-2.5	Chemicals, oils, paints, etc.....	-1.9	-2.4
Paper and printing.....		+1.9	Drugs and chemicals.....	-4.2	-1.8
Chemicals and allied products.....	-3	+3.7	Paints and colors.....	-1.6	+2.4
Stone, clay, and glass products.....	+4.0	+3.1	Oil products.....	+2	+1.0
Metal products other than iron and steel.....	-1.9	-7.3	Miscellaneous chemicals.....	-2.4	-6.4
Vehicles for land transportation.....	+3.5	+10.5	Paper.....	-8	-1.1
Miscellaneous.....	+3.0	-7	Printing and paper goods.....	-9	-2.3
All industries.....	-1.7	-1.5	Paper boxes and tubes.....	-2.0	-1.1
<b>New York</b>			Miscellaneous paper goods.....	+1	-8
Stone, clay, and glass.....	+1.8	( <sup>2</sup> )	Printing and book-making.....	-9	-2.4
Miscellaneous stone and minerals.....	-6.3	-11.3	Textiles.....	-2	-1.1
Lime, cement, and plaster.....	+2.6	+3.1	Silk and silk goods.....	-6.2	-12.4
Brick, tile, and pottery.....	+9.4	+11.3	Wool manufactures.....	+1.6	+3.9
Glass.....	( <sup>2</sup> )	+4	Cotton goods.....	-1.1	-3.6
Metals and machinery.....	-1.2	-1.2	Knit goods (excluding silk).....	+5.6	+4.2
Silver and jewelry.....	-2.8	-20.1	Other textiles.....	-4.0	-4.2
Brass, copper, and aluminum.....	-2	+2.3	Clothing and millinery.....	-7.2	-16.8
Iron and steel.....	+5.8	+1.1	Men's clothing.....	-10.0	-21.8
Structural and architectural iron.....	-8.4	-3.4	Men's furnishings.....	-1.3	-2.2
Sheet metal and hardware.....	+5	-1.4	Women's clothing.....	-11.2	-22.3
Firearms, tools, and cutlery.....	-2.1	-1.6	Women's underwear.....	-4.6	-5.4
			Women's headwear.....	-13.9	-27.4
			Miscellaneous sewing.....	+18.3	+12.4
			Laundry and cleaning.....	+1.5	+1.1
			Food and tobacco.....	-4	+2.1
			Flour, feed, and cereal.....	-2.0	+2.4
			Canning and preserving.....	+7.0	+9.4
			Other groceries.....	-5.6	-4.0
			Meat and dairy products.....	-4.0	-8
			Bakery products.....	+1.8	+6.4

<sup>1</sup> Change of less than one-tenth of 1 per cent.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, April to May, 1931		State, and industry group	Per cent of change, March to April, 1931	
	Employment	Pay roll		Employment	Pay roll
<b>New York—Continued</b>			<b>Rhode Island</b>		
Food and tobacco—Con.			Jewelry.....	-2.2	
Candy.....	-0.7	+0.8	Metal trades.....	-5.5	
Beverages.....	+2.0	+1.7	Textiles:		
Tobacco.....	+3.4	+6.1	Cottons.....	-1	
Water, light, and power.....	-1.1	+2.4	Silks.....	+6.7	
All industries.....	-2.1	-3.4	Woolens.....	+3.6	
<b>Oklahoma</b>			Worsted.....	+6.1	
Cottonseed-oil mills.....	-39.7	-43.7	Dyeing, finishing, and bleaching.....	-9	
Food production:			Rubber goods.....	-10.4	
Bakeries.....	+3.0	+2.6	Miscellaneous.....	-1.7	
Confections.....	+33.3	+32.1	All manufacturing.....	-47	
Creameries and dairies.....	(1)	-1.2	Construction:		
Flour mills.....	-16.4	-14.2	Building.....	+3.1	
Ice and ice cream.....	+13.9	+12.4	Road, bridge, sewer etc.	+236.2	
Meat and poultry.....	-3.9	-1.0	Total.....	+47.6	
Lead and zinc:			<b>Texas</b>		
Mines and mills.....	-7.1	-6.6	Auto and body works.....	+7.7	
Smelters.....	-11.6	-5.6	Bakeries.....	+1.2	
Metals and machinery:			Confectioneries.....	+196.1	
Auto repairs, etc.....	-4.3	-18.3	Pure food products.....	-44.8	
Machine shops and foundries.....	+1.0	+8.3	Ice cream factories.....	+3.4	
Tank construction and erection.....	+4.0	+8.2	Flour mills.....	-1.5	
Oil industry:			Ice factories.....	+4.1	
Producing and gasoline manufacture.....	+11.3	+12.7	Meat packing and slaughtering.....	+3.7	
Refineries.....	-8.4	-7.7	Cotton-oil mills.....	-17.0	
Printing: Job work.....	-1.9	-2.9	Cotton compresses.....	-2.4	
Public utilities:			Men's clothing manufacture.....	+7.0	
Steam-railroad shops.....	-5.8	-4.5	Women's clothing manufacture.....	-2.4	
Street railways.....	+2.1	-1.6	Brick, tile, and terra cotta.....	+6.3	
Water, light, and power.....	-4.9	-2.4	Foundries and machine shops.....	-6.5	
Stone, clay, and glass:			Structural-iron works.....	-5.8	
Brick and tile.....	+7.5	+11.1	Railroad car shops.....	+1	
Cement and plaster.....	+4	+5.0	Electric-railway car shops.....	-9	
Crushed stone.....	-6.7	-6.2	Petroleum refining.....	-2.0	
Glass manufacture.....	-2.3	-11.2	Sawmills.....	-3.0	
Textiles and cleaning:			Lumber mills.....	+7.4	
Textile manufacture.....	-1.2	-4.1	Furniture manufacture.....	+5.0	
Laundries, etc.....	-1.8	-4.2	Paper-box manufacture.....	-1.2	
Woodworking:			Cotton-textile mills.....	+6.3	
Sawmills.....	-3.8	-2.1	Cement plants.....	-5.3	
Millwork, etc.....	-1	-10.6	Commercial printing.....	-2	
All industries.....	-3.0	-2.7	Newspaper publishing.....	-9	
<b>Pennsylvania</b>			Quarrying.....	-17.4	
Metal products.....	-3.5	-9.5	Public utilities.....	-5	
Transportation equipment.....	-3.5	-10.5	Retail stores.....	-3.5	
Textile products.....	-2.0	-1.4	Wholesale stores.....	-3	
Foods and tobacco.....	+1.2	+1.2	Hotels.....	-3	
Stone, clay, and glass products.....	-3.1	-9	Miscellaneous.....	-4.9	
Lumber products.....	-3.7	-5.1	All industries.....	+7	
Chemical products.....	+1.3	-2.5			
Leather and rubber products.....	-2.0	-5.1			
Paper and printing.....	-1.0	-2.2			
All manufacturing.....	-2.5	-6.5			

<sup>1</sup> No change.



PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, March to April, 1931		State, and industry group	Per cent of change, March to April, 1931	
	Employment	Pay roll		Employment	Pay roll
<b>Wisconsin</b>			<b>Wisconsin—Continued</b>		
<i>Manual</i>			<i>Manual—Continued</i>		
Logging.....	-39.4	-29.0	Construction:		
Mining:			Building.....	+10.2	+7.5
Lead and zinc.....	+16.1	+22.1	Highway.....	+73.6	+50.8
Iron.....	+3	-6.0	Railroad.....	+15.2	+5.3
Stone crushing and quarrying.....	+24.3	+30.9	Marine dredging, sewer digging.....	+26.4	+52.8
Manufacturing:			Communication:		
Stone and allied industries.....	+8.7	-0.5	Steam railways.....	+2.1	-2.4
Metal.....	-1.9	-1.2	Electric railways.....	.0	-2.4
Wood.....	-2.2	-6.1	Express, telephone, telegraph.....	-3.4	-9.6
Rubber.....	+4.4	+13.3	Light and power.....	+6	-3.8
Leather.....	+4	+9.9	Wholesale trade.....	-1.8	-1.5
Paper.....	+1	-4	Hotels and restaurants.....	+3.3	
Textiles.....	+1.5	-3	Laundering and dyeing.....	+9	+5.0
Foods.....	+2.2	+4	<i>Nonmanual</i>		
Printing and publishing.....	-1.1	+7	Manufacturing, mines, and quarries.....	-.8	-7.9
Chemicals (including soap, glue, and explosives).....	+3	-4.5	Construction.....	-1.0	-4.8
All manufacturing.....	-.6	-.5	Communication.....	-.2	-5.5
			Wholesale trade.....	-.1	-6.9
			Retail trade—sales force only.....	+6.5	-.4
			Miscellaneous professional services.....	+1.0	-5.0

## Yearly period

State, and industry group	Per cent of change, April, 1930, to April, 1931		State, and industry group	Employment—index numbers (1925-1927=100)	
	Employment	Pay roll		April, 1930	April, 1931
<b>California</b>			<b>Illinois</b>		
Stone, clay, and glass products.....	-17.8	-23.8	Stone, clay, and glass products.....	85.8	65.7
Metals, machinery, and conveyances.....	-21.4	-27.3	Metals, machinery, and conveyances.....	105.1	75.5
Wood manufactures.....	-19.4	-29.7	Wood products.....	63.6	54.3
Leather and rubber goods.....	-3.0	-10.3	Furs and leather goods.....	94.2	89.6
Chemicals, oils, paints, etc.....	-23.8	-28.5	Chemicals, oils, paints, etc.....	99.9	86.2
Printing and paper goods.....	-6.9	-10.7	Printing and paper goods.....	98.2	88.3
Textiles.....	+1.8	-6.3	Textiles.....	92.0	90.9
Clothing, millinery, and laundering.....	-4.9	-11.4	Clothing and millinery.....	75.8	74.3
Foods, beverages, and tobacco.....	-22.4	-21.3	Foods, beverages, and tobacco.....	85.0	75.0
Miscellaneous <sup>1</sup> .....	-23.5	-30.3	All manufacturing.....	95.0	75.6
All industries.....	-19.2	-24.5	Trade, wholesale and retail.....	71.8	64.0
Public utilities.....	-9.6	-10.9	Public utilities.....	103.6	96.2
Wholesale and retail.....	-8.6	-9.8	Coal mining.....	70.2	85.6
			Building and contracting.....	58.7	34.1
			All industries.....	93.8	79.0

<sup>1</sup> Includes motion pictures.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Yearly period—Continued

State, and industry group	Employment—index numbers (1925-1927=100)		State, and industry group	Per cent of change, May, 1930, to May, 1931.	
	April, 1930	April, 1931		Employment	Pay roll
<b>Massachusetts</b>			<b>New York—Continued</b>		
Boot and shoe cut stock and findings.....	96.6	86.0	Metals and machinery.....	-22.2	-30.6
Boots and shoes.....	87.9	73.9	Silver and jewelry.....	-19.4	-35.4
Bread and other bakery products.....	103.9	99.2	Brass, copper, and aluminum.....	-17.4	-21.4
Clothing, men's.....	68.9	62.1	Iron and steel.....	-21.9	-32.4
Clothing, women's.....	105.7	99.6	Structural and architectural iron.....	-23.6	-34.6
Confectionery.....	85.9	84.6	Sheet metal and hardware.....	-14.2	-21.7
Cotton goods.....	67.2	59.2	Firearms, tools, and cutlery.....	-21.1	-33.9
Dyeing and finishing textiles.....	94.8	96.6	Cooking, heating, and ventilating apparatus.....	-16.4	-29.8
Electrical machinery, apparatus, and supplies.....	78.8	68.9	Machinery, including electrical apparatus.....	-20.9	-31.2
Foundry and machine-shop products.....	103.7	85.7	Automobiles, carriages, and airplanes.....	-32.1	-38.8
Furniture.....	92.3	72.5	Railroad equipment and repairs.....	-24.3	-28.7
Hosiery and knit goods.....	78.0	68.0	Boat and ship building.....	-41.2	-51.2
Leather, tanned, curried, and finished.....	97.9	93.1	Instruments and appliances.....	-18.8	-24.1
Paper and wood pulp.....	90.7	82.2	Wood manufactures.....	-18.0	-28.9
Printing and publishing.....	104.5	97.1	Saw and planing mills.....	-20.4	-27.3
Rubber footwear.....	82.6	55.5	Furniture and cabinet-work.....	-23.7	-35.0
Rubber goods, tires, and tubes.....	84.5	59.1	Pianos, and other musical instruments.....	-12.8	-33.8
Silk goods.....	91.9	70.4	Miscellaneous wood.....	-10.2	-15.9
Textile machinery and parts.....	82.8	61.3	Furs, leather, and rubber goods.....	-11.1	-11.3
Woolen and worsted goods.....	65.9	65.4	Leather.....	-16.5	-22.5
All industries.....	83.4	72.2	Furs and fur goods.....	-5.3	-17.7
	Per cent of change, April, 1930, to April, 1931		Shoes.....	-5.4	+4.7
	Employment	Pay roll	Other leather and canvas goods.....	-31.1	-42.6
<b>Michigan</b>			Rubber and gutta-percha.....	-17.0	-29.2
Paper and printing.....	-9.4	-14.6	Pearl, horn, bone, etc.....	-22.6	-32.1
Chemicals and allied products.....	-11.1	-21.1	Chemicals, oils, paints, etc.....	-10.0	-14.3
Stone, clay, and glass products.....	-30.3	-41.9	Drugs and chemicals.....	-12.3	-15.7
Metal products, not iron and steel.....	-17.3	-27.7	Paints and colors.....	-16.0	-15.8
Iron and steel products.....	-32.9	-41.9	Oil products.....	-5.5	-9.1
Lumber and its products.....	-23.7	-43.5	Miscellaneous chemicals.....	-11.0	-17.2
Leather and its products.....	-8.5	-17.3	Paper.....	-12.7	-19.4
Food and kindred products.....	-18.2	-22.2	Printing and paper goods.....	-7.3	-8.5
Textiles and their products.....	-11.2	-7.9	Paper boxes and tubes.....	-10.8	-7.4
Tobacco products.....	+7.6	-11.2	Miscellaneous paper goods.....	-9.1	-11.2
Vehicles for land transportation.....	-20.5	-32.5	Printing and book-making.....	-6.7	-8.4
Miscellaneous.....	-17.6	-23.0	Textiles.....	-13.2	-15.4
All industries.....	-20.9	-32.0	Silk and silk goods.....	-14.0	-20.7
	May, 1930, to May, 1931		Wool manufactures.....	-8.3	-1.8
<b>New York</b>			Cotton goods.....	-6	+7
Stone, clay, and glass.....	-11.3	-17.8	Knit goods (excluding silk).....	-14.8	-22.7
Miscellaneous stone and minerals.....	-17.0	-26.3	Other textiles.....	-20.4	-24.5
Lime, cement, and plaster.....	-7.6	-10.2	Clothing and millinery.....	-6.1	-16.5
Brick, tile, and pottery.....	-7.7	-15.3	Men's clothing.....	+1.4	-10.9
Glass.....	-13.2	-16.7	Men's furnishings.....	-13.2	-13.7
			Women's clothing.....	-8.4	-19.9
			Women's underwear.....	-5.1	-11.3
			Women's headwear.....	-9.0	-30.9
			Miscellaneous sewing.....	-20.0	-24.7
			Laundering and cleaning.....	-2.0	-6.1

## Yearly period—Continued

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# WHOLESALE AND RETAIL PRICES

## Retail Prices of Food in May, 1931

THE following tables are compiled from simple averages of the actual selling prices <sup>1</sup> received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food May 15, 1930, and April 15 and May 15, 1931, as well as the percentage changes in the year and in the month. For example, the retail price per quart of milk was 14.0 cents on May 15, 1930; 12.6 cents on April 15, 1931; and 12.3 cents on May 15, 1931. These figures show decreases of 12 per cent in the year and 2 per cent in the month.

The cost of various articles of food combined shows a decrease of 19.4 per cent May 15, 1931, as compared with May 15, 1930, and a decrease of 2.4 per cent May 15, 1931, as compared with April 15, 1931.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE MAY 15, 1931, COMPARED WITH APRIL 15, 1931, AND MAY 15, 1930

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—) May 15, 1931, compared with—	
		May 15, 1930	Apr. 15, 1931	May 15, 1931	May 15, 1930	Apr. 15, 1931
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak.....	Pound.....	48.3	40.0	39.5	-18	-1
Round steak.....	do.....	43.0	34.9	34.5	-20	-1
Rib roast.....	do.....	35.6	29.7	29.1	-18	-2
Chuck roast.....	do.....	28.7	22.3	21.7	-24	-3
Plate beef.....	do.....	19.9	15.1	14.5	-27	-4
Pork chops.....	do.....	36.1	29.7	30.1	-17	+1
Bacon, sliced.....	do.....	42.3	38.1	37.5	-11	-2
Ham, sliced.....	do.....	54.0	47.2	46.5	-14	-1
Lamb, leg of.....	do.....	35.9	31.3	31.2	-13	-0.3
Hens.....	do.....	37.4	32.6	31.7	-15	-3
Salmon, red, canned.....	do.....	31.8	34.0	33.8	+6	-1
Milk, fresh.....	Quart.....	14.0	12.6	12.3	-12	-2
Milk, evaporated.....	16-oz. can.....	10.2	9.4	9.1	-11	-3
Butter.....	Pound.....	46.3	35.2	31.3	-32	-11
Oleomargarine(all buttersubstitutes).....	do.....	25.8	21.2	19.7	-24	-7
Cheese.....	do.....	35.8	29.3	27.4	-23	-6
Lard.....	do.....	16.7	14.2	13.5	-19	-5
Vegetable lard substitute.....	do.....	24.3	23.4	23.3	-4	-0.4
Eggs, strictly fresh.....	Dozen.....	33.7	27.4	24.9	-26	-9
Bread.....	Pound.....	8.8	7.7	7.7	-13	0
Flour.....	do.....	4.8	3.8	3.7	-23	-3
Corn meal.....	do.....	5.3	4.8	4.6	-13	-4
Rollod oats.....	do.....	8.7	8.2	8.0	-8	-2
Corn flakes.....	8-oz. pkg.....	9.4	9.1	9.0	-4	-1

<sup>1</sup> In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE MAY 15, 1931, COMPARED WITH APRIL 15, 1931, AND MAY 15, 1930—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (–) May 15, 1931, compared with—	
		May 15, 1930	Apr. 15, 1931	May 15, 1931	May 15, 1930	Apr. 15, 1931
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Wheat cereal.....	28-oz. pkg.....	25.4	24.5	24.1	–5	–2
Macaroni.....	Pound.....	19.5	17.4	17.1	–12	–2
Rice.....	do.....	9.5	8.4	8.3	–13	–1
Beans, navy.....	do.....	11.6	8.4	8.2	–29	–2
Potatoes.....	do.....	4.3	2.8	2.8	–35	0
Onions.....	do.....	6.0	3.6	4.6	–23	+28
Cabbage.....	do.....	7.3	4.1	4.1	–44	0
Pork and beans.....	No. 2 can.....	11.0	9.7	9.4	–15	–3
Corn, canned.....	do.....	15.4	13.9	13.6	–12	–2
Peas, canned.....	do.....	16.3	14.6	14.1	–13	–3
Tomatoes, canned.....	do.....	12.8	10.5	10.2	–20	–3
Sugar.....	Pound.....	6.3	5.7	5.6	–11	–2
Tea.....	do.....	77.5	75.2	74.5	–4	–1
Coffee.....	do.....	40.9	34.6	33.5	–18	–3
Prunes.....	do.....	17.4	12.1	12.1	–30	0
Raisins.....	do.....	12.0	11.2	11.0	–8	–2
Bananas.....	Dozen.....	30.6	27.8	26.6	–13	–4
Oranges.....	do.....	66.7	33.1	37.9	–43	+15
Weighted food index.....					–19.4	–2.4

Table 2 shows for the United States average retail prices of specified food articles on May 15, 1913, and on May 15 of each year from 1925 to 1931, together with percentage changes in May of each of these specified years compared with May, 1913. For example, the retail price per pound of butter was 35.9 cents in May, 1913; 51.9 cents in May, 1925; 50.0 cents in May, 1926; 53.4 cents in May, 1927; 54.6 cents in May, 1928; 54.5 cents in May, 1929; 46.3 cents in May, 1930; and 31.3 cents in May, 1931.

As compared with May, 1913, these figures show increases of 45 per cent in May, 1925; 39 per cent in May, 1926; 49 per cent in May, 1927; 52 per cent in May, 1928, and in May, 1929; and 29 per cent in May, 1930. In May, 1931, there was a decrease of 13 per cent as compared with May, 1913.

The cost of the various articles of food combined showed an increase of 25.2 per cent in May, 1931, as compared with May, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE MAY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH MAY 15, 1913

[Percentage charges of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail prices on May 15—								Per cent of increase, May 15 of each specified year compared with May 15, 1913						
	1913	1925	1926	1927	1928	1929	1930	1931	1925	1926	1927	1928	1929	1930	1931
Sirloin steak...pound..	Cts. 25.6	Cts. 40.8	Cts. 41.5	Cts. 42.3	Cts. 46.1	Cts. 50.4	Cts. 48.3	Cts. 39.5	59	62	65	80	97	89	54
Round steak.....do.....	22.2	35.0	35.8	36.9	40.4	44.9	43.0	34.5	58	61	66	82	102	94	55
Rib roast.....do.....	20.0	29.8	30.4	31.2	34.1	37.2	35.6	29.1	49	52	56	71	86	78	46
Chuck roast.....do.....	16.1	22.1	22.5	23.5	26.6	30.4	28.7	21.7	37	40	46	65	89	78	35
Plate beef.....do.....	12.2	14.0	14.6	15.2	18.2	21.1	19.9	14.5	15	20	25	49	73	63	19
Pork chops.....do.....	20.9	36.0	40.3	36.4	35.4	37.7	36.1	30.1	72	93	74	69	80	73	44
Bacon, sliced.....do.....	26.9	46.4	49.3	47.6	43.1	43.4	42.3	37.5	72	83	77	60	61	57	39
Ham, sliced.....do.....	26.7	53.0	55.9	56.3	51.2	55.1	54.0	46.5	99	109	111	92	106	102	74
Lamb, leg of.....do.....	19.4	38.6	39.9	41.0	41.5	42.1	35.9	31.2	99	106	111	114	117	85	61
Hens.....do.....	22.2	37.9	41.0	38.4	37.7	42.2	37.4	31.7	71	85	73	70	90	68	43
Salmon, red, canned.....do.....		31.2	37.9	32.5	35.4	31.3	31.8	33.8							
Milk, fresh.....quart.....	8.8	13.7	13.9	13.9	14.1	14.2	14.0	12.3	56	58	58	60	61	59	40
Milk, evaporated.....16-ounce can.....		11.2	11.5	11.5	11.1	10.9	10.2	9.1							
Butter.....pound.....	35.9	51.9	50.0	53.4	54.6	54.5	46.3	31.3	45	39	49	52	52	29	13
Oleomargarine (all butter substitutes).....pound.....		30.0	30.2	28.4	27.3	27.3	25.8	19.7							
Cheese.....do.....	21.9	36.3	36.0	37.0	38.1	38.0	35.8	27.4	66	64	69	74	74	63	25
Lard.....do.....	15.8	22.6	21.5	19.0	18.1	18.4	16.7	13.5	43	36	20	15	16	6	15
Vegetable lard substitute.....pound.....		25.7	25.6	25.0	24.8	24.9	24.3	23.3							
Eggs, strictly fresh.....dozen.....	26.3	39.3	38.9	33.6	37.5	38.7	33.7	24.9	49	48	28	43	47	28	15
Bread.....pound.....	5.6	9.4	9.4	9.4	9.1	9.0	8.8	7.7	68	68	68	63	61	57	38
Flour.....do.....	3.3	6.1	6.1	5.5	5.6	5.0	4.8	3.7	85	85	67	70	52	45	12
Corn meal.....do.....	2.9	5.4	5.1	5.1	5.3	5.3	5.3	4.6	86	76	76	83	83	83	59
Rolled oats.....do.....		9.3	9.1	9.0	8.9	8.9	8.7	8.0							
Corn flakes.....8-ounce package.....		11.0	11.0	10.1	9.5	9.5	9.4	9.0							
Wheat cereal.....28-ounce package.....		24.6	25.4	25.5	25.6	25.5	25.4	24.1							
Macaroni.....pound.....		20.5	20.3	20.0	19.9	19.7	19.5	17.1							
Rice.....do.....	8.6	11.0	11.7	10.6	10.0	9.7	9.5	8.3	28	36	23	16	13	10	3
Bean, navy.....do.....		10.3	9.2	9.0	12.0	14.2	11.6	8.2							
Potatoes.....do.....	1.6	2.7	6.0	4.5	3.3	2.7	4.3	2.8	69	275	181	106	69	169	75
Onions.....do.....		8.7	7.7	8.7	7.6	7.4	6.0	4.6							
Cabbage.....do.....		5.6	6.2	8.7	8.2	5.2	7.3	4.1							
Pork and beans.....No. 2 can.....		12.5	11.9	11.6	11.4	11.9	11.0	9.4							
Corn, canned.....do.....		18.1	16.5	15.6	15.9	15.9	15.4	13.6							
Peas, canned.....do.....		18.5	17.5	16.8	16.8	16.7	16.3	14.1							
Tomatoes, canned.....No. 2 can.....		13.8	11.9	12.1	11.6	13.2	12.8	10.2							
Sugar, granulated.....pound.....	5.4	7.2	6.7	7.3	7.2	6.4	6.3	5.6	33	24	35	33	19	17	4
Tea.....do.....	54.4	75.6	76.4	77.4	77.2	77.6	77.5	74.5	39	40	42	42	43	42	37
Coffee.....do.....	29.8	52.2	51.0	48.2	49.0	49.5	40.9	33.5	75	71	62	64	66	37	12
Prunes.....do.....		17.3	17.1	15.4	13.6	14.4	17.4	12.1							
Raisins.....do.....		14.5	14.7	14.3	13.6	11.6	12.0	11.0							
Bananas.....dozen.....		37.3	35.4	33.9	32.7	31.9	30.6	26.6							
Oranges.....do.....		55.5	53.1	49.8	61.9	41.3	66.7	37.9							
All articles combined <sup>2</sup> .....									56.9	66.7	60.8	59.2	58.6	55.2	25.2

<sup>1</sup> Decrease.<sup>2</sup> Beginning with January, 1921, index numbers showing the trend of the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1930, and by months for 1929, 1930, and 1931. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.



Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913, TO MAY, 1931

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1929—Continued.			
1914: Average for year	106.7	103.4	97.1	September	165.2	194.2	148.1
1915: Average for year	121.6	99.6	96.1	October	163.5	189.2	149.3
1916: Average for year	126.8	108.2	103.2	November	163.6	184.1	147.0
1917: Average for year	186.5	137.0	127.6	December	162.9	181.8	144.9
1918: Average for year	194.3	172.8	153.4	1930: Average for year	158.0	175.8	136.5
1919: Average for year	198.0	184.2	176.6	January	162.9	183.6	138.9
1920: Average for year	232.1	185.7	185.1	February	161.6	183.1	138.5
1921: Average for year	179.8	158.1	149.5	March	160.9	183.0	137.6
1922: Average for year	159.3	150.3	135.9	April	160.3	183.3	138.9
1923: Average for year	156.9	149.0	147.6	May	159.8	181.5	137.0
1924: Average for year	160.4	150.2	142.8	June	160.1	179.9	133.7
1925: Average for year	176.2	163.0	147.1	July	158.6	175.2	133.9
1926: Average for year	175.5	171.3	145.5	August	156.9	169.9	137.4
1927: Average for year	170.7	169.9	148.7	September	156.4	173.3	138.8
1928: Average for year	167.2	179.2	150.0	October	154.4	171.1	137.8
1929: Average for year	164.1	188.4	148.6	November	152.4	164.0	135.3
January	164.1	180.9	151.9	December	151.6	161.6	129.8
February	164.1	180.3	152.6	1931:			
March	164.1	182.8	152.4	January	147.1	159.5	123.6
April	164.1	187.5	148.9	February	144.6	153.4	120.2
May	163.5	191.2	147.5	March	142.4	152.5	120.5
June	163.0	192.4	146.8	April	138.9	151.4	116.5
July	163.5	195.9	146.8	May	137.7	149.3	110.3
August	164.7	196.0	147.1				

#### Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1930,<sup>2</sup> by months for 1930 and 1931. These index numbers, or relative prices, are based on the year 1913 as 100, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1930 was 182.7, which means that the average money price for the year 1930 was 82.7 per cent higher than the average money price for the year 1913. As compared with the relative price, 196.9 in 1929, the figures for 1930 show a decrease of 14.2 points, but a decrease of 7.2 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 124.0 for April, 1931, and 121.0 for May, 1931.

<sup>2</sup> For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45. Index numbers for 1929 are published in each Labor Review, February, 1930, to February, 1931.

TABLE 4—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920, TO 1930, AND BY MONTHS FOR 1930 AND 1931

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.0
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1930	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	166.7	157.3	120.4	158.8
January	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	178.4	159.6	121.9	168.2
February	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	179.3	158.4	122.7	167.0
March	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	179.8	157.3	121.9	164.7
April	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	179.3	157.3	125.6	162.9
May	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	175.6	157.3	120.9	162.0
June	188.6	191.5	177.3	175.6	160.3	174.3	156.7	200.7	167.6	157.3	113.1	157.9
July	182.3	184.3	171.7	166.3	149.6	173.8	156.7	200.0	161.5	157.3	114.1	155.2
August	175.6	176.7	163.1	155.6	138.8	174.8	155.6	198.1	158.7	157.3	123.8	153.4
September	177.2	178.0	166.7	160.0	142.1	186.2	158.1	198.9	159.6	157.3	127.2	154.9
October	175.2	176.2	164.1	158.7	142.1	180.5	157.8	197.4	158.7	157.3	124.8	154.8
November	170.5	170.9	160.6	154.5	139.7	156.2	155.9	193.7	153.1	157.3	118.5	152.9
December	168.9	169.1	159.6	153.8	139.7	149.5	153.0	191.4	150.2	151.7	111.0	150.2
1931:												
January	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	153.5	149.4	98.4	145.2
February	161.4	161.0	154.0	145.6	131.4	131.4	145.2	183.3	148.8	146.1	94.8	141.2
March	158.7	157.8	153.0	141.9	128.1	140.0	143.0	178.4	150.2	144.9	97.4	137.1
April	157.5	156.5	150.0	139.4	124.8	141.4	141.1	175.5	153.1	141.6	91.9	132.4
May	155.5	154.7	147.0	135.6	119.8	143.3	138.9	172.9	148.8	138.2	81.7	124.0

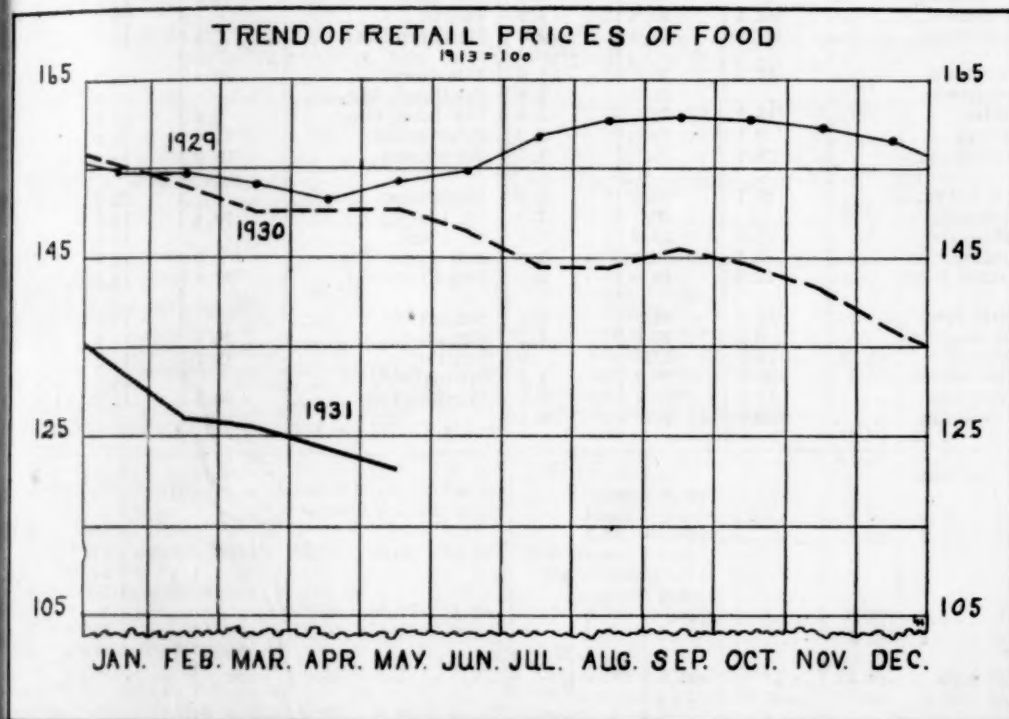
Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All ar- ticles <sup>1</sup>
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	246.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.4
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
January	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
February	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	150.0
March	107.0	102.3	157.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
April	106.3	100.0	157.1	148.5	176.7	110.3	241.2	114.5	142.5	138.9	151.2
May	105.7	97.7	157.1	145.5	176.7	109.2	252.9	114.5	142.5	137.2	150.1
June	105.1	97.4	157.1	145.5	176.7	109.2	247.1	110.9	143.0	136.2	147.9
July	103.2	101.7	157.1	139.4	176.7	109.2	194.1	110.9	142.6	135.6	144.0
August	104.4	112.5	155.4	136.4	176.7	109.2	182.4	110.9	142.3	134.6	143.7
September	110.8	124.9	155.4	133.3	176.7	110.3	188.2	107.3	142.1	132.6	145.4
October	112.0	129.9	153.6	130.3	176.7	109.2	182.4	105.5	141.9	131.2	144.4
November	110.8	140.3	151.8	127.3	173.3	106.9	170.6	107.3	141.4	129.9	141.4
December	105.7	120.6	151.8	124.2	173.3	105.8	170.6	107.3	141.4	129.2	137.2
1931:											
January	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	141.0	126.8	132.8
February	91.8	78.8	142.9	121.2	166.7	102.3	158.8	107.3	140.6	125.2	127.0
March	89.9	82.6	141.1	118.2	166.7	98.9	158.8	105.5	139.7	121.8	126.4
April	89.9	79.4	137.5	115.2	163.3	96.6	164.7	103.6	138.2	116.1	124.0
May	85.4	72.2	137.5	112.1	153.3	95.4	164.7	101.8	136.9	112.4	121.0

<sup>1</sup> 22 articles in 1913-1920; 42 articles in 1921-1931.

The curve shown in the chart below pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

### Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food<sup>3</sup> May, 1931, compared with the average cost in the year 1913, in May, 1930, and April, 1931. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average consumption of these articles in each city.<sup>4</sup>



Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of May, 99.1 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 39 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston (S. C.), Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Little Rock, Louisville, Manchester, Memphis, Milwaukee, Newark, New Haven, New Orleans, Norfolk, Omaha, Peoria, Portland (Me.), Portland (Oreg.), Providence, Richmond, St. Louis, St. Paul, Savannah, Scranton, and Springfield (Ill.).

<sup>3</sup> For list of articles see note 2, p. 214.

<sup>4</sup> The consumption figures used for January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.



TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN MAY, 1931, COMPARED WITH THE COST IN APRIL, 1931, MAY, 1930, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age in- crease May, 1931, com- pared with 1913	Percentage de- crease May, 1931, compared with—		City	Percent- age in- crease May, 1931, com- pared with 1913	Percentage de- crease May, 1931, compared with—	
		May, 1930	April, 1931			May, 1930	April, 1931
Atlanta.....	21.2	17.9	3.5	Minneapolis.....	21.9	19.2	1.8
Baltimore.....	25.5	18.5	3.1	Mobile.....		20.0	3.6
Birmingham.....	18.5	22.2	3.1	Newark.....	23.7	14.6	.9
Boston.....	21.2	20.2	3.0	New Haven.....	25.3	16.7	2.6
Bridgeport.....		16.2	2.6	New Orleans.....	15.8	21.3	3.9
Buffalo.....	23.7	19.7	1.9	New York.....	27.3	15.8	1.2
Butte.....		19.0	.6	Norfolk.....		19.1	4.9
Charleston, S. C.....	25.1	18.6	3.3	Omaha.....	14.4	21.9	2.6
Chicago.....	32.1	18.8	1.8	Peoria.....		23.8	6.2
Cincinnati.....	27.8	19.0	2.6	Philadelphia.....	27.8	16.0	1.3
Cleveland.....	17.5	20.0	1.0	Pittsburgh.....	22.4	18.1	2.2
Columbus.....		21.3	2.9	Portland, Me.....		17.8	2.3
Dallas.....	15.3	22.2	3.8	Portland, Oreg.....	8.9	21.8	1.5
Denver.....	9.1	19.6	2.2	Providence.....	19.9	20.5	2.6
Detroit.....	23.7	19.5	1.7	Richmond.....	24.9	19.6	1.9
Fall River.....	18.1	19.2	2.8	Rochester.....		22.2	6.2
Houston.....		20.1	2.9	St. Louis.....	24.4	19.6	2.5
Indianapolis.....	15.3	23.9	2.9	St. Paul.....		19.6	.7
Jacksonville.....	14.3	16.8	1.0	Salt Lake City.....	6.0	19.3	.5
Kansas City.....	22.6	18.5	2.8	San Francisco.....	22.8	18.4	.8
Little Rock.....	13.2	21.8	3.7	Savannah.....		18.5	2.9
Los Angeles.....	9.8	20.6	1.2	Scranton.....	28.3	18.8	1.4
Louisville.....	14.5	22.3	.9	Seattle.....	18.7	19.2	.2
Manchester.....	20.3	18.2	1.5	Springfield, Ill.....		24.7	2.8
Memphis.....	12.2	22.7	2.5	Washington.....	30.7	16.2	2.6
Milwaukee.....	23.7	20.3	1.1				

<sup>1</sup> Increase.

Retail Prices of Coal in May, 1931<sup>1</sup>

THE following table shows the average retail prices of coal on May 15, 1930, and April 15 and May 15, 1931, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1930, AND APRIL 15 AND MAY 15, 1931

City, and kind of coal	1930	1931		City, and kind of coal	1930	1931	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
United States:				Cincinnati, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove—				Prepared sizes—			
Average price.....	\$14.65	\$14.45	\$14.22	High volatile.....	\$5.55	\$5.05	\$5.05
Index (1913=100).....	189.6	187.0	184.0	Low volatile.....	7.53	7.03	7.03
Chestnut—				Cleveland, Ohio:			
Average price.....	\$14.33	\$14.39	\$14.19	Pennsylvania anthracite—			
Index (1913=100).....	181.0	181.8	179.4	Stove.....	14.85	14.56	14.00
Bituminous—				Chestnut.....	14.50	14.44	13.88
Average price.....	\$8.53	\$8.46	\$8.04	Bituminous—			
Index (1923=100).....	157.0	155.8	148.0	Prepared sizes—			
Atlanta, Ga.:				High volatile.....	6.98	6.67	6.58
Bituminous, prepared sizes..	\$7.12	\$6.66	\$6.69	Low volatile.....	9.08	9.25	8.57
Baltimore, Md.:				Columbus, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove.....	13.50	14.00	13.25	Prepared sizes—			
Chestnut.....	13.00	13.50	13.00	High volatile.....	5.75	5.43	5.30
Bituminous, run of mine—				Low volatile.....	7.19	7.17	7.00
High volatile.....	7.75	7.82	7.61	Dallas, Tex.:			
Birmingham, Ala.:				Arkansas anthracite—Egg..	13.50	15.00	14.50
Bituminous, prepared sizes..	6.89	6.54	6.31	Bituminous, prepared sizes..	11.00	12.58	12.25
Boston, Mass.:				Denver, Colo.:			
Pennsylvania anthracite—				Colorado anthracite—			
Stove.....	15.25	14.75	14.75	Furnace, 1 and 2 mixed....	14.75	15.25	15.25
Chestnut.....	14.75	14.75	14.69	Stove, 3 and 5 mixed.....	14.75	15.25	15.25
Bridgeport, Conn.:				Bituminous, prepared sizes..	9.43	9.57	8.47
Pennsylvania anthracite—				Detroit, Mich.:			
Stove.....	14.50	14.00	14.13	Pennsylvania anthracite—			
Chestnut.....	14.50	14.00	14.13	Stove.....	15.50	14.50	14.50
Buffalo, N. Y.:				Chestnut.....	15.00	14.50	14.50
Pennsylvania anthracite—				Bituminous—			
Stove.....	13.17	12.40	12.60	Prepared sizes—			
Chestnut.....	12.67	12.40	12.60	High volatile.....	8.05	6.94	6.97
Butte, Mont.:				Low volatile.....	9.46	8.16	8.13
Bituminous, prepared sizes..	11.09	10.49	10.49	Run of mine—			
Charleston, S. C.:				Low volatile.....	7.67	7.13	7.13
Bituminous, prepared sizes..	9.67	9.67	9.67	Fall River, Mass.:			
Chicago, Ill.:				Pennsylvania anthracite—			
Pennsylvania anthracite—				Stove.....	15.75	15.00	15.00
Stove.....	16.38	16.40	15.75	Chestnut.....	15.50	15.00	15.00
Chestnut.....	15.93	16.30	15.75	Houston, Tex.:			
Bituminous—				Bituminous, prepared sizes..	11.60	11.40	10.40
Prepared sizes—				Indianapolis, Ind.:			
High volatile.....	7.58	7.93	7.39	Bituminous—			
Low volatile.....	10.29	11.46	9.86	Prepared sizes—			
Run of mine—				High volatile.....	5.89	5.93	5.68
Low volatile.....	7.75	7.75	7.24	Low volatile.....	7.88	9.17	7.75
				Run of mine—			
				Low volatile.....	6.80	7.00	6.65

<sup>1</sup> Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1930, AND APRIL 15 AND MAY 15, 1931—Continued

City, and kind of coal	1930	1931		City, and kind of coal	1930	1931	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
Jacksonville, Fla.:				Pittsburgh, Pa.:			
Bituminous, prepared sizes.	\$14.00	\$10.00	\$10.00	Pennsylvania anthracite—			
Kansas City, Mo.:				Chestnut	\$15.00	\$14.50	\$14.25
Arkansas anthracite—				Bituminous, prepared sizes.	5.20	4.73	4.96
Furnace	11.90	12.44	11.94	Portland, Me.:			
Stove No. 4	12.92	13.50	13.33	Pennsylvania anthracite—			
Bituminous, prepared sizes.	7.20	6.71	6.73	Stove	16.32	15.84	15.84
Little Rock, Ark.:				Chestnut	16.32	16.80	15.84
Arkansas anthracite—Egg	12.50	13.00	13.00	Portland, Oreg.:			
Bituminous, prepared sizes.	9.45	9.90	9.39	Bituminous, prepared sizes.	13.12	13.21	12.82
Los Angeles, Calif.:				Providence, R. I.:			
Bituminous, prepared sizes.	16.50	16.50	15.50	Pennsylvania anthracite—			
Louisville, Ky.:				Stove	15.25	14.75	14.75
Bituminous—				Chestnut	15.25	14.75	14.75
Prepared sizes—				Richmond, Va.:			
High volatile	6.05	4.93	5.03	Pennsylvania anthracite—			
Low volatile	8.31	7.50	7.50	Stove	14.00	15.00	13.50
Manchester, N. H.:				Chestnut	14.00	15.00	13.50
Pennsylvania anthracite—				Bituminous—			
Stove	16.00	15.50	15.50	Prepared sizes—			
Chestnut	16.00	15.50	15.50	High volatile	7.75	8.75	7.25
Memphis, Tenn.:				Low volatile	7.86	9.83	7.80
Bituminous, prepared sizes.	7.93	7.66	7.02	Run of mine—			
Milwaukee, Wis.:				Low volatile	6.75	7.50	6.75
Pennsylvania anthracite—				Rochester, N. Y.:			
Stove	15.75	15.75	15.25	Pennsylvania anthracite—			
Chestnut	15.30	15.50	15.25	Stove	13.95	13.38	13.50
Bituminous—				Chestnut	13.45	13.38	13.50
Prepared sizes—				St. Louis, Mo.:			
High volatile	7.68	7.70	7.45	Pennsylvania anthracite—			
Low volatile	10.08	10.60	9.54	Stove	16.25	16.20	15.87
Minneapolis, Minn.:				Chestnut	16.00	15.95	15.91
Pennsylvania anthracite—				Bituminous, prepared sizes.	5.52	5.86	5.19
Stove	17.75	16.90	17.25	St. Paul, Minn.:			
Chestnut	17.30	16.90	17.20	Pennsylvania anthracite—			
Bituminous—				Stove	17.75	16.90	17.25
Prepared sizes—				Chestnut	17.30	16.90	17.25
High volatile	10.26	9.61	9.91	Bituminous—			
Low volatile	13.14	12.63	12.48	Prepared sizes—			
Mobile, Ala.:				High volatile	10.08	9.70	9.67
Bituminous, prepared sizes.	8.98	8.38	8.31	Low volatile	13.15	12.80	12.52
Newark, N. J.:				Salt Lake City, Utah:			
Pennsylvania anthracite—				Bituminous, prepared sizes.	8.38	7.58	7.90
Stove	13.40	12.70	12.81	San Francisco, Calif.:			
Chestnut	12.90	12.70	12.81	New Mexico anthracite—			
New Haven, Conn.:				Cerillos egg	25.00	26.00	25.00
Pennsylvania anthracite—				Colorado anthracite—			
Stove	14.40	14.90	14.15	Egg	24.50	25.50	24.50
Chestnut	14.40	14.90	14.15	Bituminous, prepared sizes.	15.88	17.00	15.75
New Orleans, La.:				Savannah, Ga.:			
Bituminous, prepared sizes.	9.00	8.07	8.07	Bituminous, prepared sizes.	2 9.68	2 9.62	2 9.62
New York, N. Y.:				Scranton, Pa.:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove	13.21	12.92	12.96	Stove	9.72	9.30	9.50
Chestnut	12.71	12.92	12.96	Chestnut	9.35	9.28	9.48
Norfolk, Va.:				Seattle, Wash.:			
Pennsylvania anthracite—				Bituminous, prepared sizes.	10.75	10.88	10.68
Stove	13.75	15.00	13.50	Springfield, Ill.:			
Chestnut	13.75	15.00	13.50	Bituminous, prepared sizes.	4.34	4.34	4.34
Bituminous—				Washington, D. C.:			
Prepared sizes—				Pennsylvania anthracite—			
High volatile	7.13	7.38	6.50	Stove	14.73	12.76	12.92
Low volatile	8.00	9.00	7.00	Chestnut	14.23	12.76	12.92
Run of mine—				Bituminous—			
Low volatile	6.50	7.00	6.63	Prepared sizes—			
Omaha, Nebr.:				High volatile	3 8.21	7.39	7.30
Bituminous, prepared sizes.	9.38	9.45	9.11	Low volatile	3 10.43	9.32	9.25
Peoria, Ill.:				Run of mine—			
Bituminous, prepared sizes.	6.35	6.33	6.23	Mixed	3 7.78	6.98	7.06
Philadelphia, Pa.:							
Pennsylvania anthracite—							
Stove	12.92	12.25	12.25				
Chestnut	12.44	12.25	12.25				

<sup>1</sup> The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bin.

<sup>2</sup> All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

<sup>3</sup> Per ton of 2,240 pounds.



### Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.

## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country.....	United States	Canada	Belgium	Czecho-slovakia	Den-mark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities.....	51	60	59	Entire country	100	21	320	1	71
Commodities included.....	42 foods	29 foods	56 (foods, etc.)	29 foods	53 foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base= 100.....	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914	October, 1913-July, 1914
<b>1924</b>									
January.....	146	145	480	836	194	1089	<sup>1</sup> 401	376	127
April.....	138	137	498	829	-----	1035	<sup>1</sup> 395	380	123
July.....	140	134	493	837	200	1052	<sup>1</sup> 401	360	125
October.....	145	139	513	877	-----	1156	<sup>1</sup> 428	383	134
<b>1925</b>									
January.....	151	145	521	899	215	1130	<sup>1</sup> 442	408	137
April.....	148	142	506	901	-----	1137	<sup>1</sup> 435	409	144
July.....	156	141	509	916	210	1145	<sup>1</sup> 451	421	154
October.....	158	147	533	875	-----	1165	<sup>1</sup> 471	433	151
<b>1926</b>									
January.....	161	157	527	854	177	1090	<sup>1</sup> 503	480	143
April.....	159	153	529	832	-----	1085	<sup>1</sup> 523	503	142
July.....	154	149	637	876	159	1105	<sup>1</sup> 610	574	145
October.....	157	147	705	888	-----	1126	<sup>1</sup> 647	624	145
<b>1927</b>									
January.....	156	153	755	914	156	1092	<sup>1</sup> 586	592	151
April.....	150	146	774	923	152	1069	<sup>1</sup> 572	580	150
July.....	150	147	790	962	153	1102	<sup>1</sup> 553	557	157
October.....	153	148	804	907	152	1156	<sup>1</sup> 526	520	152
<b>1928</b>									
January.....	152	151	813	913	152	1126	<sup>1</sup> 522	530	152
April.....	149	146	807	905	152	1119	<sup>1</sup> 530	532	151
July.....	150	146	811	943	153	1155	<sup>1</sup> 536	<sup>2</sup> 111	154
October.....	153	152	834	907	146	1183	<sup>1</sup> 562	<sup>2</sup> 115	152
<b>1929</b>									
January.....	151	152	856	900	147	1156	<sup>3</sup> 117	<sup>2</sup> 122	153
April.....	148	148	860	901	150	1118	<sup>3</sup> 118	<sup>2</sup> 125	154
July.....	155	148	874	925	149	1116	<sup>3</sup> 118	<sup>2</sup> 123	156
October.....	157	157	894	879	146	1137	<sup>3</sup> 120	<sup>2</sup> 124	154
<b>1930</b>									
January.....	152	160	895	872	145	1048	-----	<sup>2</sup> 124	150
February.....	150	159	890	865	-----	1022	<sup>2</sup> 118	<sup>2</sup> 121	148
March.....	147	157	879	853	-----	1006	-----	<sup>2</sup> 120	145
April.....	148	151	870	851	140	975	-----	<sup>2</sup> 119	143
May.....	147	151	867	852	-----	945	<sup>2</sup> 116	<sup>2</sup> 120	142
June.....	145	150	866	865	-----	937	-----	<sup>2</sup> 120	143
July.....	141	147	869	886	137	969	-----	<sup>2</sup> 122	146
August.....	141	144	872	857	-----	995	<sup>2</sup> 127	<sup>2</sup> 127	145
September.....	142	140	874	839	-----	976	-----	<sup>2</sup> 129	142
October.....	141	139	875	830	133	944	-----	<sup>2</sup> 129	140
November.....	138	138	872	818	-----	934	<sup>2</sup> 132	<sup>2</sup> 131	138
December.....	134	136	859	810	-----	903	-----	<sup>2</sup> 132	135
<b>1931</b>									
January.....	130	133	846	798	127	893	-----	<sup>2</sup> 132	134
February.....	124	127	825	789	-----	883	<sup>2</sup> 131	<sup>2</sup> 132	131
March.....	124	123	815	779	-----	879	-----	<sup>2</sup> 131	130

<sup>1</sup> For succeeding month.<sup>2</sup> In gold.<sup>3</sup> In gold; for succeeding month.

## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country	Italy	Netherlands (The Hague)	Norway	Sweden	Switzerland	United Kingdom	South Africa	India (Bombay)	Australia	New Zealand
Number of localities	47	1	31	49	33	630	9	1	30	25
Commodities included	20 foods and charcoal	Foods	Foods	50 (43 foods, 7 fuel and light)	Foods	21 foods	24 foods	17 foods	46 foods and groceries	59 foods
Computing agency	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100	1913	1921	July, 1914	July, 1914	July, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1924										
January	527	82.5	230	163	173	175	120	154	155	150
April	527	81.7	240	159	169	167	122	143	150	150
July	538	80.8	248	159	170	162	117	151	148	148
October	556	82.3	264	172	174	172	120	156	146	145
1925										
January	609	80.2	277	170	172	178	120	152	148	147
April	606	86.7	276	170	169	170	124	153	152	149
July	605	81.3	260	169	169	167	120	152	156	151
October	645	79.3	228	166	168	172	119	148	157	155
1926										
January	658	76.6	216	162	165	171	116	151	155	154
April	633	80.1	198	158	161	159	119	150	163	151
July	645	73.5	198	156	159	161	117	155	159	149
October	662	75.7	191	157	160	163	120	153	153	147
1927										
January	629	76.3	180	156	158	167	116	155	158	148
April	606	77.0	169	151	156	155	119	151	151	145
July	540	76.5	175	151	157	159	119	154	152	144
October	530	79.5	173	155	159	161	119	148	159	143
1928										
January	531	81.6	170	153	159	162	119	151	154	147
April	522	79.4	171	154	156	155	119	140	154	144
July	516	76.2	173	157	157	157	116	143	152	147
October	536	75.2	163	153	158	157	115	142	150	149
1929										
January	565	76.0	158	150	157	159	115	146	161	149
April	566	72.3	156	150	154	150	119	145	162	147
July	558	74.5	157	151	155	149	116	145	160	146
October	546	73.1	160	150	158	156	113	147	165	147
1930										
January	548		156	145	155	157	112	145	153	146
February	536		154	144	154	154	111	143	151	145
March	525	69.7	152	142	153	150	111	139	151	144
April	522		152	140	152	143	113	138	151	144
May	510		151	140	150	140	113	137	150	144
June	509	68.8	151	140	151	138	112	137	149	143
July	507		151	140	152	141	109	136	147	143
August	506		151	139	152	144	108	133	146	141
September	508	71.6	151	139	152	144	107	134	141	140
October	513		150	137	152	143	108	127	138	139
November	512		149	136	151	144	108	123	135	139
December	482	69.0	147	134	149	141	108	116	134	137
1931										
January	463		145	133	148	138	108	111	135	135
February	450		143	132	146	136	107	106	133	130
March	446	66.4	142	133	144	134	107	103	131	126

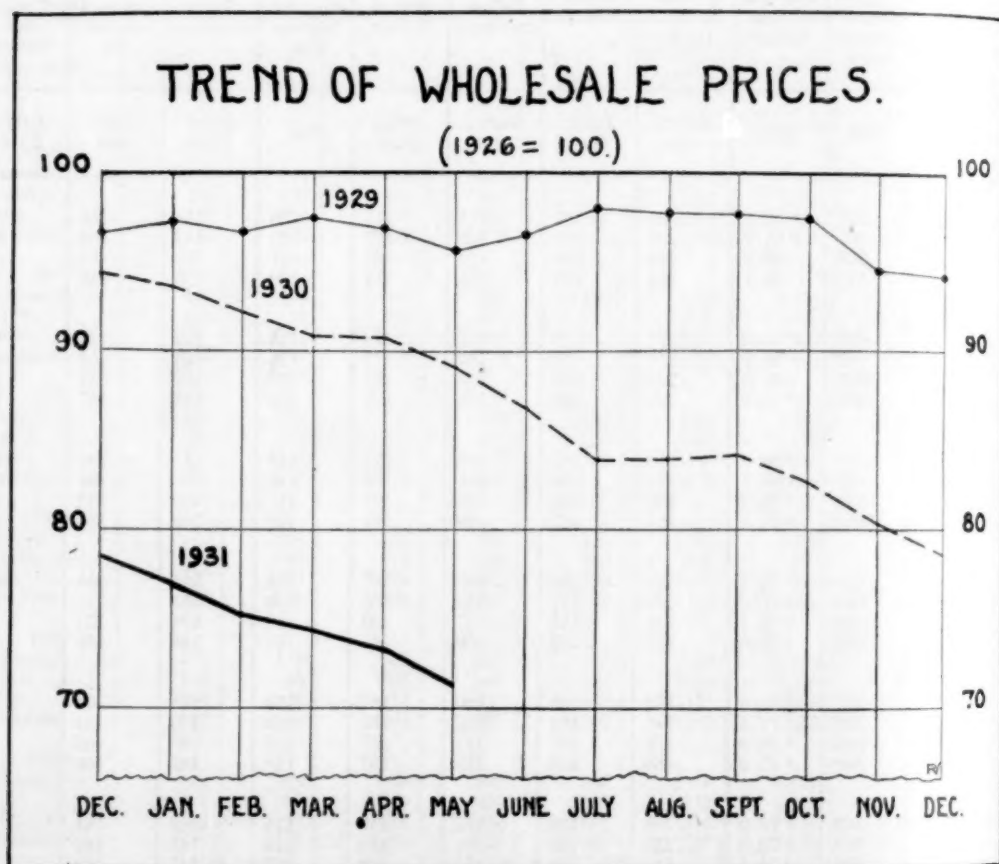
\* For second month following.



### Index Numbers of Wholesale Prices in May, 1931

**T**HE index number of wholesale prices computed by the Bureau of Labor Statistics of the United States Department of Labor shows a decline for May. This index number, which includes 550 commodities or price quotations weighted according to the importance of each article and based on prices in 1926 as 100.0, declined from 73.3 in April to 71.3 in May, a decrease of  $2\frac{3}{4}$  per cent. The purchasing power of the 1926 dollar in May was \$1.403.

Farm products as a group averaged  $4\frac{1}{3}$  per cent below April prices, due to decreases for corn, oats, beef cattle, hogs, sheep and lambs, poultry, eggs, cotton, alfalfa and clover hay, potatoes, and domestic wool. Rye, wheat, onions, and oranges, on the other hand, were higher than in the month before.



Among foods further price decreases were reported for butter, cheese, fresh and cured meat, lard, dressed poultry, and sugar, resulting in a net decrease of  $3\frac{1}{2}$  per cent for the group. Wheat and rye flour and coffee averaged somewhat higher than in April.

Hides and leather products as a whole showed no change from the April price level, advances in hides and skins being offset by declines in leather. No change was reported for boots and shoes.

In the group of textile products further decreases are shown for cotton goods, silk and rayon, and woolen and worsted goods, causing a decline of 2 per cent in the group.

Anthracite coal showed a slight advance over April, while bituminous coal declined. Petroleum products also declined, with lower

prices for fuel oil and gasoline. Coke prices remained at the April level.

Among metals there were slight declines in certain iron and steel products and noticeable declines in nonferrous metals, causing a decrease in the group total.

In the building-materials group a pronounced decline is shown for lumber, and small declines for brick, cement, and paint materials. The group as a whole decreased 3 per cent.

Chemicals and drugs, including fertilizer materials and mixed fertilizers, moved downward in the month. Both furniture and furnishings in the group of house-furnishing goods showed price recessions in May.

In the group of miscellaneous commodities, prices of cattle feed fell sharply, while paper and pulp declined slightly. Prices of crude rubber strengthened, while automobile tires were unchanged in price.

Raw materials as a whole averaged lower than in April, as did also semimanufactured articles and finished products.

In the large group of nonagricultural commodities, including all articles other than farm products, and among all commodities other than farm products and foods, May prices averaged lower than those of the month before.

## INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	May, 1930	April, 1931	May, 1931	Purchasing power of the dollar, May, 1931
All commodities.....	89.1	73.3	71.3	\$1.403
Farm products.....	93.0	70.1	67.1	1.490
Grains.....	82.1	59.5	59.6	1.678
Livestock and poultry.....	93.2	70.3	64.1	1.560
Other farm products.....	96.5	73.4	71.5	1.399
Foods.....	92.0	75.6	72.9	1.372
Butter, cheese, and milk.....	92.5	80.9	78.4	1.276
Meats.....	101.3	79.9	74.4	1.344
Other foods.....	86.3	70.9	69.7	1.435
Hides and leather products.....	102.6	87.3	87.3	1.145
Hides and skins.....	96.8	62.0	62.6	1.597
Leather.....	104.2	88.4	88.1	1.135
Boots and shoes.....	103.7	94.8	94.8	1.055
Other leather products.....	105.3	101.6	101.3	.987
Textile products.....	84.6	67.6	66.3	1.508
Cotton goods.....	90.7	75.7	73.9	1.353
Silk and rayon.....	70.3	45.2	44.0	2.273
Woolen and worsted goods.....	88.9	77.3	76.4	1.399
Other textile products.....	72.1	55.6	55.9	1.789
Fuel and lighting materials.....	78.0	61.6	60.9	1.642
Anthracite coal.....	86.9	86.6	87.6	1.142
Bituminous coal.....	88.4	84.4	83.9	1.192
Coke.....	84.0	83.7	83.7	1.195
Gas.....	97.9	96.1	(1)	.....
Petroleum products.....	66.5	37.4	35.9	2.786
Metals and metal products.....	96.8	88.7	87.8	1.139
Iron and steel.....	92.9	87.5	87.2	1.147
Nonferrous metals.....	80.6	65.1	60.6	1.650
Agricultural implements.....	95.0	94.7	94.7	1.056
Automobiles.....	106.8	98.6	98.6	1.014
Other metal products.....	98.4	95.0	94.4	1.059
Building materials.....	92.9	80.9	78.4	1.276
Lumber.....	89.7	73.3	68.4	1.462
Brick.....	86.4	81.0	80.8	1.238
Cement.....	92.7	81.0	79.7	1.255
Structural steel.....	91.9	84.3	84.3	1.186
Paint materials.....	89.1	72.5	70.5	1.418
Other building materials.....	101.8	94.2	93.2	1.073
Chemicals and drugs.....	89.9	80.1	79.1	1.264
Chemicals.....	95.3	83.3	81.9	1.221
Drugs and pharmaceuticals.....	67.8	63.0	62.8	1.592
Fertilizer materials.....	86.5	80.6	80.5	1.242
Mixed fertilizers.....	93.6	83.5	82.8	1.208
House-furnishing goods.....	96.2	90.8	89.2	1.121
Furniture.....	96.6	95.5	93.5	1.070
Furnishings.....	95.8	86.7	85.5	1.170
Miscellaneous.....	77.5	63.9	62.8	1.592
Cattle feed.....	110.3	81.2	67.9	1.473
Paper and pulp.....	85.6	81.4	81.3	1.230
Rubber.....	29.2	13.3	13.7	7.299
Automobile tires.....	54.5	45.7	45.7	2.188
Other miscellaneous.....	107.9	85.9	84.9	1.178
Raw materials.....	87.8	68.3	66.5	1.504
Semimanufactured articles.....	83.6	71.1	68.9	1.451
Finished products.....	91.0	77.1	75.1	1.332
Nonagricultural commodities.....	88.1	74.3	72.6	1.377
All commodities less farm products and foods.....	87.5	74.2	73.2	1.366

(1) Data not yet available.



## Costs of Making and Selling Bread in Canada, 1929

THE following figures summarizing the costs of making and selling bread in Canada in 1929, are taken from a report of the Dominion Department of Labor on an "Investigation into an alleged combine in the bread-baking industry in Canada," published in 1931:

TABLE 1.—SUMMARY OF COSTS PER POUND OF MAKING AND SELLING BREAD IN CANADA, 1929, BY PROVINCES

Province	Maritime	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Number of bakeries reporting	9	9	55	5	15	9	17
Ingredients:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour	2.58	2.48	2.39	2.43	2.30	2.35	2.61
Other	1.06	.65	.70	.67	.86	.79	.82
Total	3.64	3.13	3.09	3.10	3.16	3.14	3.43
Baking costs:							
Wages	.83	.53	.62	.65	.65	.79	.98
Wrappers and wrapping	.25	.20	.14	.11	.17	.31	.09
Other	.39	.26	.23	.21	.43	.52	.32
Total	1.47	.99	.99	.97	1.25	1.62	1.39
Delivery and sale:							
Wages and commissions	.93	1.20	1.12	.83	.62	.80	1.19
Other delivery costs	.55	.45	.45	.23	.55	.98	.46
Advertising	.15	.07	.11	.07	.05	.06	.08
Other selling costs	.04	.03	.02	.01	.07	.04	.04
Total	1.67	1.75	1.70	1.14	1.29	1.88	1.77
Overhead:							
Management and office	.32	.33	.37	.30	.44	.35	.46
Interest	.05	.07	.04	.08	.09	.04	.11
Other	.46	.42	.32	.23	.23	.13	.44
Total	.83	.82	.73	.61	.76	.52	1.01
Total costs	7.61	6.69	6.51	5.82	6.46	7.16	7.60

TABLE 2.—SUMMARY OF COSTS PER POUND OF MAKING AND SELLING BREAD IN CANADA, 1929, BY TYPES OF BAKERY

Type of bakery	Mill-controlled	Large independents	Smaller independents	All bakeries
Number of bakeries reporting	76	12	31	119
Ingredients:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour	2.38	2.39	2.58	2.43
Other	.78	.87	.69	.76
Total	3.16	3.26	3.27	3.19
Baking costs:				
Wages	.59	.52	1.02	.70
Wrappers and wrapping	.14	.13	.24	.16
Other	.33	.39	.21	.31
Total	1.06	1.04	1.47	1.17
Delivery and sale:				
Wages and commissions	1.11	1.16	.73	1.02
Other delivery costs	.59	.59	.23	.50
Advertising	.12	.14	.02	.10
Other selling costs	.04	.02	.06	.03
Total	1.86	1.91	1.04	1.65
Overhead:				
Management and office	.45	.31	.25	.38
Interest	.07	.14	.02	.07
Other	.32	.26	.34	.32
Total	.84	.71	.61	.77
Total costs	6.92	6.92	6.39	6.78

# IMMIGRATION AND EMIGRATION

## Statistics of Immigration for April, 1931

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

**A** TOTAL of 17,759 aliens was admitted and 19,993 departed in April, 1931, so that the alien population of the United States during the month was decreased by 2,234.

Of the number admitted in April, 3,470 were immigrants or newcomers for permanent residence in this country and 14,289 were visitors or persons passing through the country on their way elsewhere. Of the latter, 7,755 came for a short stay in this country and 6,534 were residents of the United States returning from a temporary sojourn abroad. Over two-fifths (2,874) of these returning residents make their home in New York State, 549 live in New Jersey, 467 in Massachusetts, 521 in California, 294 in Pennsylvania, 296 in Illinois, and 244 in Michigan.

Of the aliens who departed in April, 14,346 were classified as non-emigrants, either going abroad for a short stay or leaving after a visit in this country. The other 5,647 of the outgoing aliens were emigrants intending to make their future permanent residence in a foreign country, 2,276 going to Mexico, mainly via the southern land border, 2,269 went to European countries, principally Great Britain, Italy, France, Germany, Poland, and Yugoslavia, while 175 departed to Canada, 431 to Asia, and 496 to the West Indies and other countries.

The principal sources from which immigration was drawn during April were Italy, 767; Germany, 249; and Great Britain, 229. Europe as a whole contributed 2,265 immigrants this month, Canada supplied 615, and Mexico 149. In the corresponding month a year ago, European countries sent 15,172 immigrants, Canada 4,857, and Mexico 684.

Admission to the United States was denied to 809 aliens (624 male and 185 female), for various causes under the immigration laws, mainly because they failed to secure visas from American consuls. The majority of these aliens were debarred at the international land boundaries, 681 from Canada and 56 from Mexico having been turned back. The other 72 (66 male and 6 female) debarred in April were denied admission at the seaports, 40 at New York and 32 at other ports.

During April, 1931, undesirable aliens deported from the United States under warrant proceedings numbered 1,897. The largest number were returned to Mexico, 803 going to that country, while 741 were sent to European countries, principally Great Britain, Italy, Scandinavia, Yugoslavia, and Germany; 210 were sent to Canada, 76 to Asia, and 67 to other countries. Entrance without proper visa (surreptitious entry) was the principal cause for their deportation, 662 having been expelled for this reason, while 268 were of the criminal and immoral classes, 384 remained here longer than permitted,

and 87 were mentally or physically defective. Most of the latter were found to be public charges in hospitals and other institutions from causes existing prior to their entry to the United States.

The statistics covering admissions during April, 1931, show that 1,517 aliens came in under the immigration act of 1924 as immigrants charged to the quota—1,034 as husbands, wives, and unmarried children of American citizens and 675 as natives of nonquota countries, mainly Canada. Returning residents numbered 6,547, and 7,425 were tourists for business or pleasure or were simply passing through the country on their way elsewhere. The remaining 561 were Government officials, students, ministers, professors, and aliens to carry on trade under existing treaty.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1930, TO APRIL 30, 1931

	Inward					Aliens de- barred from entering <sup>1</sup>	Outward					Aliens de- ported after entering <sup>2</sup>
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens de- parted	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1930												
July.....	13, 323	16, 466	29, 789	38, 822	68, 611	881	4, 818	22, 588	27, 406	55, 366	82, 772	1, 440
August.....	14, 816	19, 724	34, 540	69, 957	104, 497	837	5, 245	29, 166	34, 411	88, 372	122, 783	1, 208
September.....	17, 792	29, 359	47, 151	80, 900	128, 051	929	5, 100	24, 604	29, 704	56, 526	86, 230	1, 552
October.....	13, 942	23, 304	37, 246	40, 702	77, 948	854	5, 352	22, 938	28, 290	32, 988	61, 278	1, 526
November.....	9, 209	13, 032	22, 241	22, 381	44, 622	734	4, 951	19, 285	24, 236	24, 420	48, 656	1, 405
December.....	6, 439	9, 939	16, 378	28, 535	44, 913	806	5, 450	17, 603	23, 053	21, 140	44, 193	1, 377
1931												
January.....	4, 091	8, 724	12, 815	19, 844	32, 659	693	4, 397	17, 169	21, 566	24, 885	46, 451	1, 517
February.....	3, 147	9, 065	12, 212	27, 508	39, 720	689	4, 720	16, 170	20, 890	33, 172	54, 062	1, 210
March.....	3, 577	12, 767	16, 344	34, 861	51, 205	597	4, 693	12, 751	17, 444	32, 278	49, 722	1, 726
April.....	3, 470	14, 289	17, 759	28, 281	46, 040	809	5, 647	14, 346	19, 993	24, 418	44, 411	1, 897
Total...	89, 806	156, 669	246, 475	391, 791	638, 266	7, 829	50, 373	196, 620	246, 993	393, 565	640, 558	14, 858

<sup>1</sup> These aliens are not included among arrivals, as they were not permitted to enter the United States.

<sup>2</sup> These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

### Immigration to Canada, 1930-31

OF THE 88,223 immigrants to Canada in the fiscal year ended March 31, 1931, 27,584 were British, 24,280 were from the United States, 13,493 were classified as belonging to northern European races, and 22,866 to other races. Compared with the record for the preceding year these figures show a decrease of 46 per cent in the total immigration, of 57 per cent in British immigration, of 21 per cent in the number of immigrants from the United States, of 56 per cent in the number of immigrants of northern European races, and of 40 per cent for other races. During the fiscal year 1930-31 the number of Canadians who returned to the United States was 30,209, or 379<sup>1</sup> more than in the preceding 12 months.

The above information and the following tables are taken from the Canadian Labor Gazette for May, 1931:<sup>2</sup>

<sup>1</sup> Labor Review, Washington, July, 1930, p. 236.

<sup>2</sup> With one exception, noted above.



TABLE 1.—IMMIGRATION TO CANADA, BY ORIGINS, YEAR ENDING MARCH 31, 1931

Origin	Year ended Mar. 31—		Origin	Year ended Mar. 31—	
	1930	1931		1930	1931
British:			Other races—Continued.		
English.....	32, 278	14, 662	Dalmatian.....	7	
Irish.....	10, 159	4, 233	East Indian.....	58	80
Scotch.....	18, 640	7, 872	Estonian.....	117	63
Welsh.....	3, 005	817	Greek.....	634	388
Total.....	64, 082	27, 584	Hebrew.....	3, 544	2, 908
United States.....	30, 727	24, 280	Italian.....	1, 277	1, 067
Northern European races:			Japanese.....	194	204
Belgian.....	696	255	Yugoslav.....	921	364
Danish.....	2, 685	820	Lettish.....	70	28
Dutch.....	1, 755	344	Lithuanian.....	964	466
Finnish.....	4, 565	2, 297	Magyar.....	5, 688	2, 401
French.....	697	347	Maltese.....	40	13
German.....	14, 281	7, 724	Montenegrin.....		3
Icelandic.....	6	25	Moravian.....	23	2
Norwegian.....	2, 256	740	Negro.....	195	120
Swedish.....	2, 918	730	Persian.....	1	2
Swiss.....	473	211	Polish.....	6, 610	3, 997
Total.....	30, 332	13, 493	Portuguese.....	13	5
Other races:			Rumanian.....	383	179
Albanian.....	26	25	Russian.....	765	879
Arabian.....	7	2	Ruthenian.....	11, 291	6, 413
Armenian.....	14	21	Serbian.....	375	140
Austrian.....	437	116	Slovak.....	2, 879	1, 957
Bohemian.....	20	11	Spanish.....	26	8
Bulgarian.....	296	295	Spanish American.....		1
Croatian.....	771	482	Syrian.....	61	54
Czech.....	434	225	Turkish.....	6	7
			Total.....	38, 147	22, 866
			Grand total.....	163, 288	88, 223

TABLE 2.—IMMIGRATION TO CANADA, YEAR ENDED MARCH 31, 1931, BY SEX, OCCUPATIONAL CLASS, AND DESTINATION

Sex, occupational class, and destination	Via ocean ports	From the United States	Total	Sex, occupational class, and destination	Via ocean ports	From the United States	Total
<i>Sex</i>				<i>Occupational status—Continued.</i>			
Men.....	24, 995	9, 322	34, 317	Domestic servants, female:			
Women.....	21, 752	7, 025	28, 777	18 years and over.....	9, 229	594	9, 823
Children under 18.....	17, 196	7, 933	25, 129	Under 18 years.....	971	42	1, 013
Total.....	63, 943	24, 280	88, 223	Other classes:			
<i>Occupational status</i>				Men.....	954	1, 382	2, 336
Farming class:				Women.....	7, 228	3, 794	11, 022
Men.....	16, 702	3, 347	20, 049	Children.....	7, 329	5, 361	12, 690
Women.....	2, 879	1, 026	3, 905	<i>Destination</i>			
Children.....	6, 612	1, 491	8, 103	Nova Scotia.....	1, 092	473	1, 565
Laboring class:				New Brunswick.....	1, 068	930	1, 998
Men.....	2, 649	699	3, 348	Prince Edward Island.....	49	92	141
Women.....	517	186	703	Quebec.....	11, 571	4, 719	16, 290
Children.....	1, 053	194	1, 247	Ontario.....	22, 330	11, 322	33, 652
Mechanics:				Manitoba.....	16, 670	854	17, 524
Men.....	3, 016	2, 048	5, 064	Saskatchewan.....	3, 407	1, 650	5, 057
Women.....	1, 017	625	1, 642	Alberta.....	3, 965	2, 476	6, 441
Children.....	754	411	1, 165	British Columbia.....	3, 786	1, 754	5, 540
Trading class:				Yukon Territory.....	4	7	11
Men.....	1, 538	1, 799	3, 337	Northwest Territories.....		3	3
Women.....	868	795	1, 663	Not given.....	1		1
Children.....	462	428	890	Total.....	63, 943	24, 280	88, 223
Mining class:							
Men.....	136	47	183				
Women.....	14	5	19				
Children.....	15	6	21				

## DIRECTORIES

### Labor Offices in the United States and in Foreign Countries

(Bureaus of Labor, employment offices, industrial commissions, State workmen's compensation insurance funds, workmen's compensation commissions, minimum wage boards, factory inspection bureaus, and arbitration and conciliation boards)

#### United States

##### Department of Labor:

Hon. W. N. Doak, Secretary.

Hon. Robt Carl White, The Assistant Secretary.

Hon. W. W. Husband, Second Assistant Secretary.

Bureau of Labor Statistics—Ethelbert Stewart, commissioner.

Bureau of Immigration—Harry E. Hull, commissioner general.

Bureau of Naturalization—Raymond F. Crist, commissioner.

Children's Bureau—Miss Grace Abbott, chief. Address: Twentieth and B Streets NW., Washington, D. C.

Employment Service—John R. Alpine, supervising director.

Conciliation Service—Hugh L. Kerwin, director.

Women's Bureau—Miss Mary Anderson, director. Address: Twentieth and C Streets NW., Washington, D. C.

United States Housing Corporation. Address: 1734 New York Avenue NW.

Address of all bureaus, except where otherwise noted, 1712 G Street NW., Washington, D. C.

##### United States Employees' Compensation Commission:

Mrs. Bessie P. Brueggeman, chairman.

Harry Bassett, commissioner.

John M. Morin, commissioner.

Address of commission: Investment Building, Washington, D. C.

##### Board of Mediation:

Samuel E. Winslow, chairman.

G. Wallace W. Hanger.

Edwin P. Morrow.

Oscar B. Colquitt.

John Williams.

George A. Cook, secretary.

Address of Board: Earle Building, Washington, D. C.

#### Alabama

Child welfare commission: B. M. Miller, ex officio chairman, governor.

##### Child welfare department—

Mrs. A. M. Tunstall, director.

Ruth Scandrett, chief labor inspector.

Mrs. Daisy Donovan, deputy child labor inspector.

Address of commission: State Capitol, Montgomery.

Workmen's compensation division (under bureau of insurance):

Chas. C. Greer, commissioner, ex officio superintendent of insurance.

Frank H. Spears, workmen's compensation clerk.

Address of division: State Capitol, Montgomery.

Board of coal-mine inspectors: W. B. Hillhouse, chief inspector, Birmingham.

United States Employment Service: R. C. Cadden, State director, Room 5, Post Office Building, Birmingham.

#### Alaska

Federal mine inspector: B. D. Stewart, supervising mining engineer, United States Geological Survey, Juneau.

**Arizona**

## Industrial commission:

R. B. Sims, chairman.  
 W. E. Hunter.  
 C. W. Hartman.  
 Harry R. Tritle, secretary.  
 Burt H. Clinger, attorney.  
 Wm. M. Brawner, industrial agent.  
 A. C. Kingsley, medical examiner.

Address of commission: Phoenix.

State inspector of mines: Tom C. Foster, Phoenix.

United States Employment Service: H. M. Watson, State director, 233 Ellis Building, Phoenix.

**Arkansas**

## Bureau of labor and statistics:

W. A. Rooksbery, commissioner.  
 E. I. McKinley, deputy commissioner.  
 W. F. Sharp, statistician.  
 J. D. Newcomb, jr., chief boiler inspector.

## Industrial welfare commission—

W. A. Rooksbery, ex officio member and chairman.  
 Mrs. Frank Gibb, secretary.  
 Claude M. Burrow.  
 Mrs. C. H. Hatfield.  
 Elmer Grant.

Address of bureau: State Capitol, Little Rock.

Mine inspection department: Claude Speegle, State mine inspector, Fort Smith.  
 United States Employment Service:

W. H. Manville, State director, 206 Wallace Building, Little Rock.  
 W. A. Rooksbery, Federal director, Room 326, State Capitol, Little Rock.

**California**

## Department of industrial relations: Will J. French, director.

## Division of industrial accidents and safety—

Will J. French, chairman of industrial accident commission.  
 F. W. Fellows, member of industrial accident commission.  
 Edward O. Allen, member of industrial accident commission.  
 C. H. Fry, superintendent of safety.  
 H. L. White, secretary.  
 M. R. Gibbons, M. D., medical director.  
 A. I. Townsend, attorney.

State compensation insurance fund—Frank J. Creede, manager.

## Division of housing and sanitation—

R. W. Kearney, chief of division.  
 Most Rev. E. J. Hanna, D. D., president commission of immigration and housing.  
 Charles C. Chapman, member commission of immigration and housing.  
 Melville Dozier, jr., member commission of immigration and housing.  
 J. Earle Cook, member commission of immigration and housing.  
 Mrs. Mattie W. Richards, member commission of immigration and housing.

Division of State employment agencies—W. A. Granfield, chief.

Division of labor statistics and law enforcement—James W. Mullen, chief.

## Division of industrial welfare—

Mrs. Mable E. Kinney, chief of division.  
 A. B. C. Dohrmann, chairman of industrial welfare commission.  
 Mrs. Katherine Philips Edson, member of industrial welfare commission.  
 Mrs. Parker S. Maddux, member of industrial welfare commission.  
 William R. Kilgore, member of industrial welfare commission.  
 George Durand, member of industrial welfare commission.

Division of industrial fire safety—Jay W. Stevens, chief, 340 Pine Street, San Francisco.

Address of department: State Building, San Francisco.



## Department of industrial relations—Continued.

## United States Employment Service—

Walter G. Mathewson, State director, 219-A Post Office Building,  
San Francisco.

W. A. Granfield, Federal director, 722 Pacific Building, San Francisco.

**Colorado**

## Bureau of labor statistics:

Charles M. Armstrong, secretary of State and ex officio labor commissioner.

M. H. Alexander, deputy labor commissioner and chief factory inspector.

Address of bureau: Denver.

## Industrial commission:

Thomas Annear, chairman.

W. H. Young.

William E. Renshaw.

Feay B. Smith, secretary.

W. L. Hogg, referee.

State compensation insurance fund: Howard Redding, manager.

Coal-mine inspection department: James Dalrymple, chief inspector, Denver.

Bureau of mines (metal mines): John T. Joyce, commissioner, Denver.

United States Employment Service: Quince Record, State director, 139 New  
Custom House, Denver.

**Connecticut**

## Department of labor and factory inspection:

Joseph M. Tone, commissioner.

John J. Burke, deputy commissioner.

P. H. Connolly, deputy commissioner of factory inspection.

State employment offices—Joseph M. Tone, commissioner.

Address of department: State Office Building, Hartford.

## Board of compensation commissioners:

Frederic M. Williams, chairman, county courthouse, Waterbury.

Charles Kleiner, 151 Court Street, New Haven.

Charles E. Williamson, 955 Main Street, Bridgeport.

Leo J. Noonan, 54 Church Street, Hartford.

Albert J. Bailey, 43 Broadway, Norwich.

## State board of mediation and arbitration:

Johnstone Vance, New Britain.

Joseph H. Lawlor, Waterbury.

Walter J. Couper, New Haven.

United States Employment Service: Harry E. Mackenzie, State director, State  
Capitol, Hartford.

**Delaware**

## Labor commission:

Miss Helen S. Garrett, chairman.

John H. Hickey.

Newlin T. Booth.

Thomas C. Frame, jr.

George A. Hill.

Miss Marguerite Postles, secretary.

Address of commission: Wilmington.

Child labor division—Charles A. Hagner, chief, Wilmington.

Women's labor division—Miss Marguerite Postles, assistant, Wilmington.

## Industrial accident board:

Walter O. Stack, president.

Robert K. Jones.

William J. Swain.

James B. McManus, secretary.

Address of board: Delaware Trust Building, Wilmington.

United States Employment Service: Francis E. B. McCann, State director, 700  
Market Street, Wilmington.

**District of Columbia**

United States Employment Service: Agatha D. Ward, director, 480 Indiana Avenue NW., Washington, D. C.

**Florida**

State labor inspector: John H. Mackey, Jacksonville.

United States Employment Service: James A. Davis, State director, 230 East Forsyth Street, Jacksonville.

**Georgia**

Department of commerce and labor:

Hal M. Stanley, commissioner.

W. E. Christie, assistant commissioner

Mrs. Edith Coley, chief clerk.

P. T. McCutchen, factory inspector.

Address of department: Atlanta.

Industrial commission:

Hal M. Stanley, chairman (ex officio).

George M. Napier, attorney general (ex officio).

Max E. Land, representing employers.

T. E. Whitaker, representing employees.

C. W. Roberts, medical director.

Sharpe Jones, secretary-treasurer.

Elizabeth Ragland, assistant secretary.

A. R. Arnau, auditor and inspector.

H. L. Spahr, chief statistician.

Address of department: Atlanta.

United States Employment Service:

Otto F. Bading, State Director, 508 Federal Building, Atlanta.

Cator Woolford, Federal director, 90 Fairlie Street, Atlanta.

**Hawaii***City and County of Honolulu*

Industrial accident board:

M. Macintyre, chairman.

A. J. Campbell.

A. J. Wirtz.

E. B. Clark.

K. B. Barnes.

A. F. Schmitz, secretary.

*County of Maui*

Industrial accident board:

W. F. Crockett, chairman.

Dan T. Carey.

Ralph H. Wilson.

Mrs. W. Weddick.

Paul F. Lada.

Mrs. Francis S. Wadsworth, inspector and secretary

Address of board: Wailuku.

*County of Hawaii*

Industrial accident board:

Byron K. Baird, chairman.

Otto Rose.

James Webster.

Wm. C. Foster.

Dr. H. B. Elliot.

Mrs. L. Hazel Bayly, secretary.

Address of board: Hilo.

*County of Kauai*

## Industrial accident board:

J. M. Lydgate, chairman, Lihue.  
 H. H. Brodie, Hanapepe.  
 J. B. Fernandez, jr., Kapaa.  
 J. P. Clapper, Kealia.  
 G. M. Coney, Lihue.

**Idaho**

## Industrial accident board:

Joel Brown, chairman.  
 G. W. Suppiger.  
 Frank Langley.  
 P. H. Quirk, secretary.  
 Address of board: Boise.

State insurance fund: P. C. O'Malley, manager, Boise.

Inspector of mines: Stewart Campbell, Boise.

United States Employment Service: Thomas W. McDonough, State director, third floor, Boise City Building, Boise.

**Illinois**

## Department of labor:

Barney Cohen, director.  
 W. B. McHenry, assistant director.

Address of department: State Capitol, Springfield.

Division of factory inspection—William H. Curran, chief inspector, 608 South Dearborn Street, Chicago.

Division of private employment agencies inspection—John J. McKenna, chief inspector, 608 South Dearborn Street, Chicago.

Division of free employment offices—Frank P. Unger, State superintendent, State Capitol, Springfield.

General advisory board (for Illinois free employment offices)—

B. M. Squires, chairman.  
 A. H. R. Atwood, M. D., secretary (representing employers).  
 Oscar G. Mayer (representing employers).  
 John H. Walker (representing employees).  
 Miss Agnes Nestor (representing employees).

Address of board: 116 North Dearborn Street, Chicago.

## Industrial commission—

Clarence S. Piggott, chairman.  
 Peter Grieve, jr. (representing employers).  
 H. H. Willoughby (representing employers).  
 Charles F. Wills (representing employees).  
 Clayton A. Pense (representing employees).  
 Walter F. Rohm, secretary.

Address of commission: 205 West Wacker Drive, Chicago.

Division of statistics and research—Howard B. Myers, chief, 205 West Wacker Drive, Chicago.

## Department of mines and minerals:

John G. Millhouse, director, 315 East Cook Street, Springfield.  
 Peter Joyce, assistant director, 722 North Grand Avenue west, Springfield.

United States Employment Service: Ralph B. Powers, State director, 116 North Dearborn Street, Chicago.

**Indiana**

## Industrial board:

Roscoe Kiper, chairman.  
 Harry J. McMillan.  
 Walter W. Wills.  
 William A. Faust.  
 Horace G. Yergin.  
 Charles A. Rockwell, secretary.

Department of factories, buildings, and workshops—James E. Reagin, chief inspector.

Department of boilers—James M. Woods, chief inspector.

Department of women and children—Mrs. Jessie Gremelspacher, director.

Address of board: Indianapolis.



Department of mines and mining—Albert C. Dally, chief inspector, Indianapolis  
 United States Employment Service:

Clarence W. Baker, State director, Room 416, Federal Building, Indianapolis.

Walter W. Wills, Federal director, Room 404, State Capitol, Indianapolis.

### Iowa

Bureau of labor statistics: A. L. Urick, Commissioner, Des Moines.

State-Federal Employment Service—

George B. Albert, chief clerk, Des Moines.

John W. Holmes, clerk, Sioux City.

Workmen's compensation service:

A. B. Funk, industrial commissioner.

Ralph Young, deputy commissioner.

Ora Williams, secretary.

Dr. Oliver J. Fay, medical counsel.

Address of service: Des Moines.

State bureau of mines:

W. E. Holland, inspector first district, Centerville.

R. T. Rhys, inspector second district, Ottumwa.

Edward Sweeney, inspector third district, Des Moines.

W. A. Scheck, secretary, Des Moines.

United States Employment Service:

T. L. Taggart, State director, Room 27, Federal Building, Sioux City.

Henry V. Hoyer, Federal director, bureau of labor statistics, Des Moines.

### Kansas

Commission of labor and industry:

G. Clay Baker, chairman.

Harry C. Bowman, commissioner.

C. J. Beckman, commissioner.

Address of commission: Statehouse, Topeka.

Department of workmen's compensation—

G. Clay Baker, chairman.

Harry C. Bowman, commissioner.

Address of department: Statehouse, Topeka.

Department of Labor—

C. J. Beckman, Federal director and commissioner of labor in charge of factory and mine inspection, free employment, and women's and children's division.

Address of department: Statehouse, Topeka.

United States Employment Service:

Jay M. Besore, State director, Room 300, Insurance Building, Topeka.

C. J. Beckman, Federal director, Statehouse, Topeka.

### Kentucky

Department of agriculture, labor, and statistics:

Newton Bright, commissioner, Frankfort.

Edward F. Seiller, chief labor inspector, Louisville.

John W. Rogers, deputy labor inspector, Louisville.

John M. Hunt, deputy labor inspector, Covington.

Miss Louie Duncan Brown, deputy labor inspector, Lexington.

Mrs. Hallie B. Williams, deputy labor inspector, Louisville.

Department of mines: John F. Daniel, chief, Lexington.

Workmen's compensation board:

Clyde R. Levi, chairman, Ashland.

Charles Gorman, member, Louisville.

Luther C. Little, member, McKee.

H. S. McGuire, referee, Lexington.

W. T. Short, referee, Richmond.

J. R. Higdon, referee, Owensboro.

T. N. Hazelip, referee, Louisville.

William Dingus, referee, Prestonsburg.

Earl Maxwell Heavrin, secretary, Frankfort.

J. B. Eversole, actuary, Frankfort.

United States Employment Service: George Baker, State director, third floor, City Building, Central City.

#### Louisiana

Bureau of labor and industrial statistics:

E. L. Engerran, commissioner.

Mrs. M. V. Kirby, secretary.

Address of bureau: New Orleans.

United States Employment Service: Charles W. Swallow, State director, 521 Common Street, Shreveport.

#### Maine

Department of labor and industry: Charles O. Beals, commissioner, Augusta.

Industrial accident commission:

Donald D. Garcelon, chairman.

Earle L. Russell.

Granville C. Gray.

Charles O. Beals (ex officio), commissioner of labor.

Wilbur D. Spencer (ex officio), insurance commissioner.

Address of commission: Augusta.

State board of arbitration and conciliation:

Edward F. Gowell, Berwick.

(2 vacancies.)

United States Employment Service:

Harry T. Burr, State director, Room 59 Libby Building, Portland.

Charles O. Beals, Federal director, Statehouse, Augusta.

#### Maryland

Commissioner of labor and statistics: J. Knox Insley, M. D., 16 West Saratoga Street, Baltimore.

Bureau of mines—John J. Rutledge, chief mine engineer, 22 Light Street, Baltimore.

Mine examining board—John J. Rutledge, chairman, 22 Light Street, Baltimore.

State industrial accident commission:

Robert H. Carr, chairman.

Omar D. Crothers.

Daniel R. Randall.

Albert E. Brown, secretary.

Miss R. O. Harrison, director of claims.

Robert P. Bay, M. D., chief medical examiner.

Gladys M. Tunstall, statistician.

State accident fund—

James E. Green, jr., superintendent.

Address of commission: 741 Equitable Building, Baltimore.

United States Employment Service:

Raymond W. Bellamy, State director, 411 Customs House, Baltimore.

J. Knox Insley, M. D., Federal director, 16 West Saratoga Street, Baltimore.

#### Massachusetts

Department of labor and industries:

E. Leroy Sweetser, commissioner.

Miss Ethel M. Johnson, assistant commissioner.

Associate commissioner (constituting the board of conciliation and arbitration and the minimum wage commission)—

Edward Fisher, chairman.

Herbert P. Wasgatt.

Samuel Ross.

Veronica A. Lynch, secretary to the commissioner.

Division of industrial safety—John P. Meade, director.

Division of statistics (including public employment offices)—Roswell F. Phelps, director.

Division of standards—Francis Meredith, director.

## Department of labor and industries—Continued.

Division of minimum wage—Miss Ethel M. Johnson, acting director.

Industrial commission—Leon M. Lamb, secretary.

Division on the necessities of life—Ralph W. Robart, director.

Address of department: Statehouse, Boston.

## Department of industrial accidents:

William W. Kennard, chairman.

Alfred B. Cenedella.

Edward E. Clark.

Joseph A. Parks.

Chester E. Gleason.

Charles M. Stiller.

Mrs. Emma S. Tousant.

Robert E. Grandfield, secretary.

Francis D. Donoghue, M. D., medical adviser.

Address of department: Statehouse, Boston.

## United States Employment Service:

Walter C. Conroy, State director, 25 Tremont Street, Boston.

E. Leroy Sweetser, Federal director, 473 Statehouse, Boston.

**Michigan**

## Department of labor and industry:

Samuel G. Beattie, labor commissioner.

Samuel H. Rhoads, chairman, compensation commissioner.

Isabel Larwill, compensation commissioner.

Theo. T. Jacobs, compensation commissioner.

Leo J. Herrick, statistician.

John L. Boer, secretary.

Address of department: Lansing.

State accident fund: Roy M. Watkins, manager, Lansing.

## United States Employment Service:

Henry Irvin, State director, Room 204, Post Office Building, Detroit.

Samuel G. Beattie, Federal director, State Capitol, Lansing.

**Minnesota**

## Industrial commission:

J. D. Williams, chairman.

Henry McColl.

Henry M. Gallagher.

F. N. Gould, secretary.

Division of workmen's compensation—G. E. Hottinger, chief.

Division of accident prevention—David R. Henderson, chief.

Division of boiler inspection—George Wilcox, chief.

Division of women and children—Miss Louise E. Schutz, superintendent.

Division of statistics—Carl E. Dahlquist, chief.

Address of commission: 612 Bremer Arcade, St. Paul.

## United States Employment Service:

Richard T. Jones, State director, Room 304, Post Office Building, Minneapolis.

J. D. Williams, Federal director, 612 Bremer Arcade, St. Paul.

**Mississippi**

## Bureau of industrial hygiene and factory inspection:

J. W. Dugger, M. D., director.

Mrs. Myrtis Clements, secretary.

Address of bureau: P. O. Box 784, Jackson.

**Missouri**

Department of labor and industrial inspection: Mrs. Amanda D. Hargis, commissioner, Jefferson City.

## Workmen's compensation commission:

Evert Richardson, chairman.

Orin H. Shaw.

Jay J. James.

Wm. T. Findly, secretary.

Address of commission: Jefferson City.



## Bureau of mines:

Frank G. Fenix, chief inspector, Joplin.  
John H. Boos, secretary, Jefferson City.

## United States Employment Service:

George E. Tucker, State director, 2023 Main Street, Kansas City.  
Amanda D. Hargis, Federal director, Capitol Building, Jefferson City.

**Montana**

## Department of agriculture, labor, and industry:

A. H. Stafford, commissioner.

Division of labor—Warren W. Moses, chief.

Address of department: Helena.

## Industrial accident board:

J. Burke Clements, chairman.

G. P. Porter, State auditor and (ex officio) commissioner of insurance.

A. H. Stafford (ex officio), treasurer of the board.

Gordon G. Watt, secretary.

Harold O. Mead, chief accountant.

Duncan McRae, clerk.

Bureau of safety inspection—Duncan McRae, chief clerk.

Address of board: Helena.

United States Employment Service: Stephen Ely, State director, Room 17, Montana Building, Helena.

**Nebraska**

Department of labor: Cecil E. Matthews, secretary of labor and commissioner.

Bureau of compensation—Cecil E. Matthews, chief.

Address of department: State Capitol, Lincoln.

United States Employment Service: Mrs. Lulah T. Andrews, State director, Room 528, Peters Trust Building, Omaha.

**Nevada**

Office of labor commissioner: William Royle, labor commissioner, Carson City.

## Industrial commission:

Dan J. Sullivan, chairman.

William Royle.

Alex L. Tannahill.

Vinton A. Muller, M. D., chief medical adviser, Reno.

Address of commission: Carson City.

Inspector of mines: A. J. Stinson, Carson City.

## United States Employment Service:

Archie L. Cross, State director, Washoe County Library Building, Reno.

William Royle, Federal director, Room 34, Capitol Building, Carson City.

**New Hampshire**

## Bureau of labor:

John S. B. Davie, commissioner, Concord.

Bion L. Nutting, factory inspector, Concord.

Harold I. Towle, factory inspector, Laconia.

Mary R. Chagnon, factory inspector, Manchester.

## State board of conciliation and arbitration:

J. R. McLane (representing public), Manchester.

Walter F. Duffy (representing manufacturers), Franklin.

William J. Cullen (representing labor), Manchester.

## United States Employment Service:

Henry A. Tafe, State director, Room 218, Shea Building, Nashua.

John S. B. Davie, Federal director, State Capitol, Concord.

**New Jersey**

Department of labor: Charles R. Blunt, commissioner.

Bureau of general and structural inspection and explosives—Charles H. Weeks, deputy commissioner of labor.

Bureau of hygiene, sanitation, and mine inspection—John Roach, deputy commissioner of labor.

Bureau of electrical and mechanical equipment—Charles H. Weeks and John Roach, deputy commissioners.

Bureau of statistics and records—James A. T. Gribbin, chief.

Bureau of women and children—Mrs. Isabelle M. Summers, director.

Bureau of engineers' license, steam boiler, and refrigerating plant inspection—Joseph F. Scott, chief examiner.

Bureau of workmen's compensation—

Charles R. Blunt, commissioner.

William E. Stubbs, deputy commissioner and secretary.

Harry J. Goas, deputy commissioner.

Charles E. Corbin, deputy commissioner.

John J. Stahl, deputy commissioner.

Daniel A. Spair, deputy commissioner.

John W. Kent, supervisor of informal hearings.

John C. Wegner, special investigator.

Harry F. Monroe, special investigator.

Frank C. Mobius, special investigator.

Hugh J. Arthur, special investigator.

William J. Wilkie, special investigator.

Maurice S. Avidan, M. D., medical adviser.

Bureau of employment—Russell J. Eldridge, director.

Address of department: Trenton.

United States Employment Service:

Percy L. Anderson, State director, Room 757, 1060 Broad Street, Newark.

Charles R. Blunt, Federal director, Statehouse, Trenton.

Russell J. Eldridge, assistant Federal director, Room 757, 1060 Broad Street, Newark.

**New Mexico**

United States Employment Service: Mrs. E. A. Perrault, State director, Court-house, Albuquerque.

**New York**

Department of labor:

Frances Perkins, industrial commissioner.

Elmer F. Andrews, deputy industrial commissioner.

Maud Swartz, secretary.

Industrial board—

Richard J. Cullen, chairman.

James S. Whipple.

Edward W. Edwards.

Leonard W. Hatch.

Nelle Swartz.

Division of inspection—James L. Gernon, director.

Division of workmen's compensation—

Verne A. Zimmer, director.

Raphael Lewy, M. D., chief medical examiner.

Address of division: 150 Leonard Street, New York.

Division of industrial relations—James Brady, director.

Bureau of mediation and arbitration—A. J. Portenar, chief mediator.

Division of employment—Fritz Kaufmann, chief.

Bureau of aliens—Lillian R. Sire, director.

Division of industrial codes—

Thomas C. Eipper, referee.

Edward E. J. Pierce, referee.

Division of engineering—William J. Picard, chief, Albany.

Division of industrial hygiene—James D. Hackett, director.

## Department of labor—Continued.

## Division of statistics and information—

Eugene B. Patton, director.

S. W. Wilcox, chief statistician, Albany.

Bureau of women in industry—Frieda S. Miller, director.

State insurance fund—C. G. Smith, manager, 432 Fourth Avenue New York.

Division of self-insurance—J. A. McGinniss, director.

General address of department, except where otherwise noted: 80 Centre Street, New York.

## United States Employment Service:

Ralph H. Koch, State director, 15 Pine Street, New York.

Frances Perkins, Federal director, 80 Centre Street, New York.

**North Carolina**

## Department of labor:

Frank D. Grist, commissioner, Raleigh.

Division of standards and inspection<sup>a</sup>—E. F. Carter, director.

## Industrial commission:

Matt H. Allen, chairman.

J. Dewey Dorsett, representing employers.

T. A. Wilson, representing employees.

E. W. Price, secretary.

Address of commission: Raleigh.

## United States Employment Service:

Nathan A. Gregg, State director, Mint Building, Charlotte.

Frank D. Grist, Federal director, Agricultural Building, Raleigh.

**North Dakota**

Department of agriculture and labor: Joseph A. Kitchen, commissioner, Bismarck.

## Workmen's compensation bureau:

Joseph A. Kitchen, chairman.

W. C. Preckel.

S. A. Olsness.

W. H. Stutsman.

R. E. Wenzel.

Carl E. Knudtson, secretary.

Address of bureau: Bismarck.

Minimum wage commission: Alice Angus, secretary, Bismarck.

Coal mine inspection department: Edwin R. Rupp, inspector, Bismarck.

United States Employment Service: Roland A. Rottweiler, State director, Room 307, Federal building, Grand Forks.

**Ohio**

Department of industrial relations: T. A. Edmondson, director.

## Industrial commission—

Wellington T. Leonard, chairman.

L. E. Nysewander.

Thomas M. Gregory.

T. A. Edmondson, secretary.

## Division of workmen's compensation—

Lloyd D. Teeters, chief and assistant director, department of industrial relations.

(Vacancy) supervisor of claims.

W. K. Merriman, assistant supervisor of claims.

Evan I. Evans, supervisor of actuarial division.

G. L. Coffinberry, auditor and statistician.

H. H. Dorr, M. D., chief medical examiner.

Division of labor statistics and employment offices—John B. Gilbert, chief.

## Division of safety and hygiene—

Thomas P. Kearns, superintendent.

Carl C. Beasor, chief statistician.

Division of factory inspection—Edgar W. Brill, chief.

<sup>a</sup> All powers, duties, functions, and personnel of the Child Welfare Commission are transferred to this division.



## Department of industrial relations—Continued.

Division of boiler inspection—Carl O. Myers, chief.

Division of examiners of steam engineers—Jos. M. Wirmel, chief.

Division of mines—James Berry, chief.

Address of department: Columbus.

## United States Employment Service:

Wm. Robinett, State director, 501 Spahr Building, Columbus.

John B. Gilbert, Federal director, Pure Oil Building, Columbus.

**Oklahoma**

## Department of labor:

W. A. Pat Murphy, commissioner.

James Hughes, assistant commissioner.

Bureau of factory inspection—Fred Kemp, chief inspector.

Division of women and children in industry—

Zelda Harrel, inspector.

Grace Clark, inspector.

Bureau of labor statistics—Adah E. Mauldin, statistician.

Bureau of free employment—

Oklahoma City office (men's division), J. R. McCarty, superintendent.

Oklahoma City office (women's division), Mrs. L. C. Pierce, superintendent.

Tulsa office, E. N. Ellis, superintendent.

Muskogee office, S. A. Reed, superintendent.

Enid office, J. O. Roach, superintendent.

State board of arbitration and conciliation—

W. A. Pat Murphy, chairman.

James Hughes, secretary.

Address of department except where otherwise noted: Oklahoma City.

## Industrial commission:

Thomas H. Doyle, chairman.

Matt McElroy, commissioner.

Fred H. Fannin, commissioner.

Chester Napps, secretary.

Nancy Hood, statistician.

Address of commission, Oklahoma City.

United States Employment Service: W. A. Pat Murphy, Federal director,  
State Capitol, Oklahoma City.**Oregon**

## Bureau of labor:

C. H. Gram, commissioner and factory inspector, Salem.

Carl Stoll, deputy commissioner, Portland.

## State welfare commission:

(Vacancies)

## State industrial accident commission:

Chas. T. Early, chairman.

Arthur W. Lawrence.

Albert H. Hunter.

Andrew C. Smith, M. D., medical examiner.

Address of commission: Salem.

## State board of conciliation:

William L. Brewster, chairman, Failing Building, Portland.

Charles N. Ryan, 704 Couch Building, Portland.

William E. Kimsey, secretary, 286 Main Street, Portland.

## United States Employment Service:

E. J. Stack, State director, 101 Courthouse Building, Portland.

C. H. Gram, Federal director, Room 101, Courthouse, Portland.

**Pennsylvania**

Department of labor and industry: Dr. A. M. Northrup, secretary.  
Industrial board—

Dr. A. M. Northrup, chairman.  
A. L. Linderman.  
John A. Phillips.  
George W. Fisher.  
Mrs. Hugh Neely Fleming.  
J. S. Arnold, secretary.

Workmen's insurance board—

Dr. A. M. Northrup, chairman.  
Charles F. Armstrong, insurance commissioner.  
Edward Martin, State treasurer.

State workmen's insurance fund—W. Jack Stiteler, jr., manager.

Workmen's compensation board—

Arthur C. Dale, chairman.  
William J. Burchinal.  
Edward J. Hunter.  
Dr. A. M. Northrup, ex officio.  
J. C. Detweiler, secretary.

Bureau of executive—W. A. Riddle, deputy secretary.

Bureau of workmen's compensation—W. H. Horner, director.

Bureau of employment—S. S. Riddle, director.

Bureau of industrial relations—Ambrose Langan, director.

Bureau of industrial standards—John Campbell, director.

Bureau of women and children—Beatrice McConnell, director.

Bureau of inspection—Harry D. Immel, director.

Bureau of rehabilitation—Harry Trebilcox, director.

Bureau of statistics—William J. Maguire, director.

Bureau of bedding and upholstery—M. P. Frederick, director.

Bureau of accounting—William C. Halfpenny, director.

Address of department: Harrisburg.

Department of mines:

(3 vacancies.)

United States Employment Service:

Lewis G. Hines, State director, Room 1005, Gimbel Building, Philadelphia.

S. S. Riddle, Federal director, 410 South Office Building, The Capitol, Harrisburg.

**Philippine Islands**

Bureau of labor (under department of commerce and communications):

Hermenegildo Cruz, director.

Modesto Joaquin, assistant director.

Administrative division—Lorenzo L. Zialcita, chief clerk.

Office of the attorney of labor—Bernabe Butalid, attorney.

Conciliation and arbitration division—Mrs. Nieves Baens del Rosario, chief.

Division of inspection and statistics—Rosendo Regalado, chief.

Interisland migration division—Gabriel Alba, commissioner.

Marine and employment division—Albino C. Dimayuga, chief.

Accounting division—Julian Yap, accountant.

Address of bureau: Manila.

**Porto Rico**

Department of labor:

Prudencio Rivera Martinez, commissioner.

William D. López, assistant commissioner.

Louis Villaronga, chairman, mediation and conciliation commission.

Address of department: San Juan.

## Industrial commission:

Juan M. Herrero, chairman.  
 M. Leon Parra, commissioner.  
 F. Paz Granela, commissioner.  
 Joaquin A. Becerril, secretary.  
 Address of commission: San Juan.

**Rhode Island**

Department of labor: Daniel F. McLaughlin, commissioner, Providence.  
 Office of factory inspectors: J. Ellery Hudson, chief inspector, Providence.  
 Board of labor (for the adjustment of labor disputes):  
 Daniel F. McLaughlin, commissioner of labor, chairman.  
 Edwin O. Chase (representing employers).  
 William C. Fisher (representing employers).  
 Albert E. Hohler (representing employees).  
 Roderick A. McGarry (representing employees).  
 Christopher M. Dunn, deputy commissioner of labor, secretary.  
 Address of board: Providence.

## United States Employment Service:

Roderick A. McGarry, State director, Room 225, 49 Westminster Street, Providence.  
 Daniel F. McLaughlin, Federal director, Room 318, State Capitol, Providence.

**South Carolina**

Department of agriculture, commerce, and industries: J. W. Shealy, commissioner.  
 Labor division—A. H. Gilbert, jr., chief inspector.  
 Address of department: Columbia.  
 Board of conciliation and arbitration:  
 James C. Self, chairman, Greenwood.  
 H. E. Thompson, secretary, Batesburg.  
 W. H. McNairy, Dillon.  
 United States Employment Service: R. D. McMillan, State director, Florence Trust Building, Florence.

**South Dakota**

Office of industrial commissioner: D. R. Perkins, industrial commissioner, Pierre.  
 United States Employment Service:  
 Charles S. Weller, State director, Room 3, Federal Building, Mitchell.  
 Charles McCaffree, Federal director, State Capitol, Pierre.

**Tennessee**

## Department of Labor:

James M. Southall, commissioner and State fire marshal.  
 Albert M. Alexander, secretary.  
 Division of factory inspection—M. F. Nicholson, chief inspector.  
 Division of mines—A. W. Evans, chief inspector, Petros.  
 Division of hotel inspection—Sam I. Bolton, inspector.  
 Division of workmen's compensation—W. M. Hannah, superintendent.  
 Address of department except where otherwise noted: Nashville.  
 United States Employment Service: Major Robert Nelson Campbell, State director, 215 Post Office Building, Knoxville.

**Texas**

## Bureau of labor statistics:

Robert B. Gragg, commissioner.  
 Mrs. Lillian Davis Smith, secretary.  
 Marie Nash, assistant secretary.  
 Address of bureau: Austin.

## Industrial commission (handles industrial disputes):

Carl Pool, chairman, Sherman.  
 A. L. Kinsley, secretary, San Antonio.  
 W. J. Moran, El Paso.  
 Harry L. Spencer, Houston.  
 L. L. Shields, Coleman.



## Industrial accident board:

Earle P. Adams, chairman.  
Mrs. Espa Stanford, member.  
H. T. Kimbro, member.  
W. V. Howerton, secretary.

Address of board: Austin.

United States Employment Service: Cony Warren Woodman, State director,  
249 West Twelfth Street, Fort Worth.

**Utah**

## Industrial commission:

William M. Knerr, chairman  
O. F. McShane.  
Henry N. Hayes.  
Carolyn I. Smith, secretary.

State insurance fund—Charles A. Caine, manager.

Coal mine inspector—John Taylor.

Address of commission: Salt Lake City.

United States Employment Service: A. C. Wilson, State director, 214 Boston  
Building, Salt Lake City.

**Vermont**

## Office of commissioner of industries:

Clarence R. White, commissioner, Montpelier.  
Fred S. Pease, deputy commissioner, Burlington.  
Charles A. Root, factory inspector, Burlington.

## United States Employment Service:

L. L. Lane, State director, Federal Building, Rutland.  
Clarence R. White, Federal director, State Capitol, Montpelier.

**Virginia**

## Department of labor and industry:

John Hopkins Hall, jr., commissioner.  
H. W. Furlow, assistant commissioner.  
Virginia J. Reynolds, secretary.  
Division of mines—A. G. Lucas, chief.

Division of factory inspection—S. A. Minter, chief.

Division of women and children—Carrie B. Farmer, director.

Division of research and statistics—R. H. Barker, director.

Address of department: Richmond.

## Industrial commission:

C. G. Kizer, chairman.  
W. H. Nickels, jr.  
Parke P. Deans.  
W. F. Bursey, secretary.  
Wade M. Miles, deputy commissioner, Bristol.  
F. P. Evans, statistician.  
W. L. Robinson, examiner.

Address of commission except where otherwise noted: State Office  
Building, Richmond.

## United States Employment Service:

Walter W. Bryant, State director, Room 305, Federal Building, Roanoke.  
John Hopkins Hall, jr., Federal director, Room 318, State Office Building,  
Richmond.

**Washington**

## Department of labor and industries:

Claire Bowman, director.  
H. D. Hailey, secretary.

## Division of industrial insurance—

John Shaughnessy, supervisor of industrial insurance and medical aid.  
L. L. Goodnow, M. D., chief medical adviser.  
R. J. McLean, claim agent.

## Division of safety—

L. M. Rickard, supervisor of safety.  
William R. Reese, mines inspector.  
George T. Wake, deputy mine inspector.

## Department of labor and industries—Continued.

## Division of industrial relations—

L. M. Rickard, supervisor of industrial relations.

William J. Coates, assistant supervisor of industrial relations.

R. M. Van Dorn, industrial statistician.

Mrs. G. V. Haney, supervisor of women in industry.

## Industrial welfare committee—

Claire Bowman, director of labor and industries, chairman.

John Shaughnessy, supervisor of industrial insurance.

L. M. Rickard, supervisor of industrial relations.

R. M. Van Dorn, industrial statistician.

Mrs. G. V. Haney, supervisor of women in industry, executive secretary.

Address of department: Olympia.

United States Employment Service: W. C. Carpenter, State director, Room 421,  
Federal Building, Spokane.**West Virginia**

Bureau of labor: Howard S. Jarrett, commissioner, Charleston.

## Workmen's compensation department:

Lee Ott, commissioner.

John T. Moore, assistant to commissioner.

C. D. Smith, secretary.

J. E. Brown, attorney.

J. W. Smiley, actuary.

Lewis J. Frey, statistician.

Russel Kessel, M. D., chief medical examiner.

Address of department: Charleston.

Department of mines: R. M. Lambie, chief, Charleston.

## United States Employment Service:

Arthur D. Lilly, State director, Room 304, Davidson Building, Charleston.

Howard S. Jarrett, Federal director, Public Library Building, Charleston.

**Wisconsin**

## Industrial commission:

Fred M. Wilcox, chairman.

R. G. Knutson, commissioner.

Voyta Wrabetz, commissioner.

A. J. Altmeyer, secretary.

Safety and sanitation department—R. McA. Keown, engineer.

Workmen's compensation department—F. T. McCormick, H. A. Nelson,

A. T. Flint, I. M. Kittleson, H. F. Ohm, examiners.

Apprenticeship department—Walter F. Simon, supervisor.

Woman and child labor department—

Taylor Frye, director.

Miss Maud Swett, field director, Milwaukee.

Statistical department—Orrin A. Fried, statistician.

Address of commission: Madison.

## Board of conciliation:

Chris Hochgreve, Green Bay.

Jacob P. Beuscher, Milwaukee.

Homer Witzig, Superior.

## United States Employment Service:

Roy Empey, State Director, Room 418, Post Office Building, Milwaukee.

R. G. Knutson, Federal director, State Capitol, Madison.

Harry Lippart, assistant Federal director, 510 Edison Street, Milwaukee.

**Wyoming**

## Department of labor and statistics:

W. E. Jones, commissioner.

L. T. Cox, deputy commissioner.

Address of department: Cheyenne.

## Child labor board:

W. E. Jones, secretary.

B. H. McIntosh.

W. H. Hassed, M.D.

Address of board: Cheyenne.

## Coal-mine inspection department:

Lyman Fern, chief, Rock Springs.  
David K. Wilson, deputy, Rock Springs.  
R. E. Gildroy, deputy, Sheridan.

## Workmen's compensation department (under State treasurer's office):

H. R. Weston, State treasurer.  
C. B. Morgan, deputy treasurer.  
Arthur Calverley, assistant deputy and department manager.

Address of department: Capitol Building, Cheyenne.

United States Employment Service: Joseph F. Minnick, State director, 405  
Con-Roy Building, Casper.

**Foreign Countries****Canada**

## Department of labor:

Hon. Senator G. D. Robertson, minister.  
H. H. Ward, deputy minister.  
Gerald H. Brown, assistant deputy minister.  
M. S. Campbell, chief conciliation officer.  
R. A. Rigg, director of employment service.  
E. G. Blackadar, superintendent of Dominion Government annuities.  
F. A. McGregor, registrar of combines investigation act.  
C. W. Bolton, chief of statistical branch.  
F. J. Plant, chief of labor intelligence branch.  
Address of department: Ottawa, Ontario.

**Alberta**

## Bureau of labor:

W. Smitten, commissioner of labor.  
F. W. Hobson, chief boiler inspector.  
H. M. Bishop, chief factory inspector.  
G. P. Barber, chief theater inspector.  
A. A. Millar, chief mine inspector.

Employment service—William Carnill, director.

## Minimum wage board—

A. A. Carpenter, chairman.  
W. Smitten, commissioner of labor, secretary.  
Address of bureau: Edmonton.

## Government employment bureau:

William Carnill, director, Edmonton.  
L. J. Ricks, superintendent, Calgary.  
W. G. Paterson, superintendent, Edmonton.  
A. R. Redshaw, superintendent, Lethbridge.  
J. W. Wright, superintendent, Medicine Hat.  
A. A. Colquhoun, superintendent, Drumheller.

## Workmen's compensation board:

Alex Ross, chairman.  
Walter F. McNeill, commissioner.  
James A. Kinney, commissioner.  
Frederick D. Noble, secretary.  
Address of board: Qu'Appelle Building, Edmonton.

**British Columbia**

## Department of labor:

Hon. W. A. McKenzie, minister.  
J. D. McNiven, deputy minister.  
W. T. Hamilton, chief factories inspector, Vancouver.

Employment service—J. H. McVety, general superintendent, Vancouver.

## Minimum wage (for females) board—

J. D. McNiven, deputy minister of labor, chairman.  
Mrs. Helen G. MacGill.  
Thomas Mathews.  
Miss Mabel Agnes Cameron, secretary.



## Department of labor—Continued.

Hours of work and minimum wage (for males) board—J. D. McNiven, deputy minister of labor, chairman.

Address of department except where otherwise noted: Parliament Building, Victoria.

## Workmen's compensation board:

E. S. H. Winn, K. C., chairman.

Parker Williams.

Hugh B. Gilmour.

F. W. Hinsdale, secretary.

Address of board: Board of Trade Building, Vancouver.

## Manitoba

## Bureau of labor:

W. R. Clubb, minister of public works.

Edward McGrath, secretary.

Arthur MacNamara, assistant deputy minister of public works.

## Fair wage board—

Arthur MacNamara.

J. W. Morley.

E. Claydon.

Thomas J. Williams.

C. J. Harding.

## Minimum wage board—

George N. Jackson, chairman.

Mrs. Edna M. Nash.

James Winning.

Mrs. Jessie MacIennnon.

E. R. Kennedy.

Address of bureau: Winnipeg.

## Workmen's compensation board:

C. K. Newcombe, commissioner.

George E. Carpenter, director.

J. L. McBride, director.

A. J. Fraser, M. D., chief medical officer.

Nicholas Fletcher, secretary.

P. V. E. Jones, assistant secretary.

Address of board: Winnipeg.

## New Brunswick

Department of labor: H. I. Taylor, minister, St. George.

## Workmen's compensation board:

John A. Sinclair, chairman.

Frank C. Robinson, vice chairman.

R. B. Irving, acting commissioner.

Department of factory inspection—John Kenney, inspector.

Address of board: St. Johns.

## Nova Scotia

## Department of public works and mines:

Colonel, the Hon. Gordon S. Harrington, premier and minister.

Norman McKenzie, deputy minister.

Address of department: Halifax.

## Workmen's compensation board:

F. L. Milner, K. C., chairman.

Fred W. Armstrong, vice chairman.

John T. Joy, commissioner.

Dr. M. D. Morrison, medical officer.

John McKeagan, assessment officer.

N. M. Morison, claims officer.

Miss M. M. Skerry, secretary.

Address of board: Halifax.

## Employment service:

C. J. Cotter, superintendent men's division, Halifax.

Miss Elda E. Caldwell, superintendent women's division, Halifax.

## Ontario

## Department of labor:

Hon. J. D. Monteith, minister.  
 A. W. Crawford, deputy minister.  
 D. M. Medcalf, chief inspector of steam boilers.  
 James T. Burke, chief inspector of factories.  
 J. M. Brown, chairman, board of examiners of stationary and hoisting engineers.  
 H. C. Hudson, general superintendent, Ontario government employment offices.  
 A. W. Crawford, inspector of apprenticeship.  
 Address of department: East Block, Parliament Buildings, Toronto.

## Minimum wage board:

Dr. J. W. Macmillan, chairman.  
 H. G. Fester.  
 Miss Margaret Stephens.  
 R. A. Stapells.

Address of board: East Block, Parliament Buildings, Toronto.

## Workmen's compensation board:

Victor A. Sinclair, K. C., chairman.  
 Henry J. Halford, vice chairman.  
 George A. Kingston, commissioner.  
 N. B. Wormith, secretary.  
 T. Norman Dean, statistician.  
 F. W. Graham, claims officer.  
 D. E. Bell, chief medical officer.  
 J. M. Bremner, medical officer.  
 J. F. Hazlewood, medical officer.

Address of board: Metropolitan Building, Toronto.

## Quebec

## Department of public works and labor:

Hon. J. N. Francoeur, K. C., minister, Quebec.  
 Louis Guyon, deputy minister and chief inspector of industrial establishments and public buildings, 97 Notre Dame Street east, Montreal.  
 Alfred Robert, fair wages officer and deputy chief inspector, 97 Notre Dame Street east, Montreal.  
 Maxime Morin, K. C., registrar of board of conciliation and arbitration, Parliament Buildings, Quebec.  
 Joseph Ainey, general superintendent of provincial employment bureaus, 61 Notre Dame Street east, Montreal.

## Women's minimum wage commission—

Gustave Francq, chairman, 89 Notre Dame Street east, Montreal.  
 Alfred Crowe, secretary, 229 St. Paul Street, Quebec.

## Workmen's compensation commission:

Robert Taschereau, K. C., chairman.  
 Simon Lapointe, K. C.  
 O. E. Sharpe.  
 O. G. Molleur, secretary.

Address of commission: 73 Grande Allee, Quebec.

## Saskatchewan

## Department of railways, labor, and industries:

Hon. J. A. Merkley, minister.  
 Thomas M. Molloy, deputy minister.  
 Thomas Inglis, chief boiler inspector.  
 Samuel A. Lee, mines inspector.  
 A. E. Etter, game commissioner.  
 Gerald E. Tomsett, general superintendent of employment service.  
 Miss G. Halbert, minimum wage inspector.

Address of department: Farmers' Building, Regina.

**Minimum wage board:**

A. J. Wickens, K. C., chairman, Moose Jaw.  
 Mrs. Ethel Henderson, Moose Jaw.  
 Mrs. Grace Chandler, Regina.  
 Ralph Heseltine, Regina.  
 Stanley Edwards, Saskatoon.

**Workmen's compensation board:**

N. R. Craig, chairman.  
 Address of board: 7 Farmers' Building, Regina.

**Other Foreign Countries****Albania.**

Ministry of Public Works (address, Tirana).

**Argentina.**

Ministry of the Interior (address, Buenos Aires):  
 National labor department.

**Australia.**

Commonwealth Bureau of Census and Statistics (address, Melbourne).

**Austria.**

Federal Ministry of Social Administration (address, 1 Hanuschgasse 3, Vienna).

**Belgium.**

Ministry of Industry, Labor, and Social Welfare (address, 12 Rue Lambert, Brussels):  
 Labor office.

**Bolivia.**

National Labor Office (address, La Paz).  
 Ministry of Promotion (address, La Paz).

**Brazil.**

Ministry of Agriculture, Industry, and Commerce (address, Rio de Janeiro).

**Bulgaria.**

Ministry of Commerce, Industry, and Labor (address, Rue Alaninska, 48, Sofia):  
 Labor section.

**Chile.**

Ministry of Social Welfare (address, Santiago).

**China.**

Ministry of Industry, Commerce, and Labor (address, Nanking).  
 Department of labor.<sup>1</sup>

**Colombia.**

General Labor Office:  
 Ministry of Industries (address, Bogota).

**Costa Rica.**

Ministry of Public Works (address, San Jose).

**Cuba.**

Secretariat of Agriculture, Commerce, and Labor (address, Habana).

**Czechoslovakia.**

Ministry of Social Welfare <sup>2</sup> (address, Valdstynska, 10, Prague, III).  
 Ministry of Public Works <sup>3</sup> (address, Presslova, 6, Prague-Smichov).

**Denmark.**

Social Ministry:  
 Labor board (address, 25 Amaliegade, Copenhagen).  
 Labor and factory inspection department (address, 25 Amaliegade, Copenhagen).  
 Workmen's compensation board (address, 3 Kongens Nytorv, Copenhagen).

<sup>1</sup> Three sections dealing with labor organizations, labor legislation, and social welfare, respectively.

<sup>2</sup> Handles labor relations at large.

<sup>3</sup> Labor questions relating to workers in mines; insurance statistics.



**Dominican Republic.**

Department of Agriculture and Commerce (address, San Domingo).

**Dutch East Indies.**

Department of Justice (address, Batavia, Java):  
Labor bureau.

**Ecuador.**

Ministry of Public Welfare and Labor (address, Quito).

**Egypt.**

Ministry of Interior, Council of Arbitration (address, Cairo).  
Department of labor.<sup>4</sup>

**Estonia.**

Ministry of Education and Social Welfare (address, Tallinn).

**Finland.**

Ministry of Social Affairs (address, Helsingfors).

**France.**

Ministry of Labor and Hygiene (address, Rue de Grenelle, 127, Paris).

**Germany.**

Ministry of Labor (address, Scharnhorststrasse, 35, Berlin NW., 40).

**Great Britain.**

Ministry of Labor (address, Montague House, Whitehall, London SW., 1).

**Greece.**

Ministry of National Economy (address, Rue Valaoritou, 3 Athens).  
Directorate of labor and social welfare.

**Guatemala.**

Ministry of Public Works <sup>5</sup> (address, Guatemala).  
Ministry of Agriculture <sup>6</sup> (address, Guatemala).

**Haiti.**

Department of Labor (address, Port au Prince).

**Honduras.**

Minister of Public Works and Agriculture (address, Tegucigalpa).

**Hungary.**

Ministry of Social Welfare and Labor (address, Kyralyi Palota, Budapest).  
Government Statistical Office (address, II Keleti Karoly utca 5, Budapest).

**India.**

Department of Industries (address, Delhi).  
Labor Office of the Government of Bombay (address, Bombay).

**Irish Free State.**

Department of Industry and Commerce (address, Government Building, Dublin).

**Italy.**

Ministry of Corporations (address, Rome).

**Japan.**

Bureau of Social Affairs (address, Tokyo).

**Latvia.**

Ministry of Public Welfare (address, Riga).

**Lithuania.**

Ministry of Home Affairs (address, Kaunas).

**Luxemburg.**

General Directorate of Agriculture, Industry, and Social Welfare (address, Luxemburg City):  
Division of commerce, industry, and labor.

<sup>4</sup> Handles all matters pertaining to labor.

<sup>5</sup> Handles questions relating to urban labor matters

<sup>6</sup> Handles questions relating to rural labor matters.

**Mexico.**

Department of Industry, Commerce, and Labor (address, Avenida Republica Argentina, num. 12, Mexico City).

**Netherlands.**

Ministry of Labor, Commerce, and Industry (address, Beznidenhout, The Hague).

**New Zealand.**

Department of Labor (address, Wellington).

**Nicaragua.**

Ministry of Public Works (address, Managua).

**Norway.**

Ministry of Social Affairs (address, Viktoria terrasse, 11-13, Oslo).

**Panama.**

Ministry of Agriculture and Public Works (address, Panama).

**Paraguay.**

Ministry of Interior (address, Asuncion).

**Persia.**

Ministry of Commerce, Agriculture, and Public Works (address, Teheran).

**Peru.**

Ministry of Public Works (address, Lima).

**Poland.**

Ministry of Labor and Social Welfare (address, Place Dombrowski, 1, Warsaw).

**Portugal.**

Ministry of Commerce and Communications (address, Lisbon).

**Rumania.**

Ministry of Labor (address, Bucharest).

**Salvador.**

Ministry of the Interior, Industry, and Agriculture (address, San Salvador).

**Siam.**

Ministry of Commerce and Communications (address, Bangkok):  
Board of commercial development (deals with labor matters).

**Spain.**

Ministry of Labor (address, Madrid).

**Sweden.**

Ministry of the Interior, Division of Social Affairs (address, Mynttorget 2, Stockholm):  
Social board.

**Switzerland.**

Federal Department of National Economy (address, Palais Federal, Bern):  
Federal labor office.

**Turkey.**

Ministry of Economy (address, Ankara (Angora), Turkey).

**Union of South Africa.**

Department of Labor (address, Pretoria).

**Uruguay.**

Ministry of Industries (address, Montevideo):  
National labor office.

**Venezuela.**

Ministry of Agriculture, Mines, and Trade (address, Caracas).

**Yugoslavia.**

Ministry of Social Policies (address, Belgrade).

# PUBLICATIONS RELATING TO LABOR

## Official—United States

INDIANAPOLIS COMMISSION FOR STABILIZATION OF EMPLOYMENT. FACT-FINDING COMMITTEE. *Problems of unemployment in Indianapolis. Indianapolis, November, 1930. 27 pp.*

MASSACHUSETTS.—Department of Labor and Industries. *Report of an investigation as to the causes of existing unemployment and to remedies therefor. Boston, 1931. 104 pp. (House Report No. 1298.)*

This study shows the extent of unemployment in Massachusetts, employment of persons over 45 years of age, effect of consolidations and mergers, removal of industries, effect of immigration on surplus labor, technological unemployment, and employment of married women, and gives remedies for unemployment, and recommendations.

OHIO.—Industrial Commission. *Special Bulletin No. 2: Statistical reports of injuries to minors under 18 years of age, occupational disease claims, additional award claims. Prepared by the Division of Safety and Hygiene. Columbus, 1931. 96 pp.*

SPOKANE COUNTY [WASH.] COORDINATION BUREAU. State-National Cooperation Committee. *Employment survey in the Pacific northwest, winter of 1930-31. Spokane, Wash., 1931. [Various paging, mimeographed.]*

This report shows the principal industries of the State of Washington, the number of persons engaged in each, and the activities of the various counties designed to meet the problems arising out of unemployment.

WESTMORELAND COUNTY [PA.] UNEMPLOYMENT COMMITTEE.—*Report to Dr. Clyde King, Chairman, Pennsylvania Unemployment Committee. Greensburg, Pa., February 11, 1931. 13 pp. (Mimeographed.)*

This study shows the dollar value of projected public work in the county for 1931 and facts relative to the business activity in important industrial establishments and centers.

UNITED STATES.—Congress. House of Representatives. *Report No. 2453 (71st Cong., 3d sess.): Regulation of wages paid to employees by contractors awarded Government building contracts. Washington, 1931. 2 pp.*

— Committee on Labor. *Regulation of wages paid to employees by contractors awarded Government building contracts. Hearings, 71st Cong., 3d sess., on H. R. 16619, January 31, 1931. Washington, 1931. 22 pp.*

— Senate. *Document No. 327 (71st Cong., 3d sess.): Injunctions in labor disputes; statement by Hon. Henrik Shipstead, together with a memorandum on the substitute bill by Winter S. Martin. Washington, 1931. 18 pp.*

— Committee on Pensions. *Old-age pensions. Hearing before a subcommittee of the Committee on Pensions, 71st Cong., 3d sess., on S. 3257, a bill to encourage and assist the States in providing pensions to the aged, February 24, 1931. Washington, 1931. 175 pp.*

— Department of Commerce. Bureau of Mines. *Bulletin 332: Permissible electric mine lamps, by L. C. Ilsley and A. B. Hooker. Washington, 1930. 39 pp.*

This report gives a brief account of the introduction of electric lighting in mines, a review of the preliminary and approval work on electric mine lamps up to July, 1917, when a previous bulletin was issued, and describes the lamp approval work from that date to July, 1930.



UNITED STATES.—Department of Commerce, Bureau of Mines. *Economic Paper No. 11: The economics of strip coal mining*, by O. E. Kiessling and others. Washington, 1931. 32 pp.; charts

Reviewed in this issue.

— Bureau of the Census. *Fifteenth Census of the United States, 1930. Vol. I.—Population; number and distribution of inhabitants*. Washington, 1931. 1268 pp.; maps.

— Division of Public Construction. *Organization to promote employment in the State of Ohio, 1929 and 1930*. Washington, 1930. 47 pp.

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 535: Wages and hours of labor in the slaughtering and meat-packing industry, 1929*. Washington, 1931. 122 pp.

Summary data from this survey were published in the *Labor Review* for May, 1930 (pp. 142-155).

— — — *Bulletin No. 538: International Association of Public Employment Services. Seventeenth annual meeting, Philadelphia, Pa., September 24-27, 1929; Eighteenth annual meeting, Toronto, Canada, September 9-12, 1930*. Washington, 1931. 212 pp.

— — — *Bulletin No. 542: Report of the Advisory Committee on Employment Statistics*. Washington, 1931. 31 pp.

— Women's Bureau. *Bulletin No. 85: Wages of women in 13 States*. Washington, 1931. 213 pp.

During the five years beginning early in 1920 and ending in the first part of 1925, the Women's Bureau carried on a number of studies of women's wages, earnings, hours, and working conditions in different States, the results of which were published in a series of bulletins. In the present bulletin the bureau has brought together the figures relating to the wages and earnings of 100,967 white and 6,120 colored women, working in 1,472 plants in 13 different States.

— — — *Bulletin No. 86: Activities of the Women's Bureau of the United States*. Washington, 1931. 15 pp.

### Official—Foreign Countries

BULGARIA.—Direction Générale de la Statistique. *Statistique des accidents de travail dans le Royaume de Bulgarie pendant l'année 1927*. Sofia, 1930. 34 pp.

The report shows for 1927 the number of industrial accidents in Bulgaria, by degree and type of disability, by industry, by cause, and by age and sex of the workers killed or injured, comparative figures being given in some cases for each year back to 1922.

CANADA.—Department of Labor. *Investigation into an alleged combine in the bread-baking industry in Canada*. Ottawa, 1931. 58 pp.; charts.

Data on costs of making and selling bread in Canada, taken from this publication, are given in this issue.

— — — *Second annual report on cooperative associations in Canada, 1929*. Ottawa, 1929. 83 pp.

— — — *Third annual report on cooperative associations in Canada, 1930*. Ottawa, 1930. 100 pp.

GREAT BRITAIN.—Board of Trade. *Final report on the third census of production of the United Kingdom (1924): The food, drink, and tobacco trades and the clothing trades*. London, 1931. 353 pp.

— — — *The textile trades*. London, 1930. 285 pp.

Each of these two volumes contains a general report on the respective trade groups covered, with separate reports for individual trades in each group containing sections on production, wages, employment, mechanical equipment, and tables summarizing the data obtained.

GREAT BRITAIN.—Home Office. *Welfare Pamphlet No. 3: Welfare and welfare supervision in factories.* London, 1931. 25 pp., illus.

A brief review of welfare practices and factory regulations regarding working conditions in British factories.

—Industrial Health Research Board. *Report No. 62: Two studies of absenteeism in coal mines.* London, 1931. 52 pp.; diagrams.

Reviewed in this issue.

—Medical Research Council. *Report for the year 1929–30.* London, 1931. 138 pp.

The report contains a brief statement of the researches into industrial diseases carried out during the year.

—Ministry of Labor. *Working hours: Legislation in Austria, Belgium, Czechoslovakia, France, Luxemburg, and Spain, and proposed legislation in Germany and Italy.* London, 1930. 192 pp. (Cmd. 3647.)

—Registry of Friendly Societies. *Report for the year 1930. Part 5: Building societies—Section I, Proceedings and statistical news.* London, 1931. 19 pp.

INTERNATIONAL LABOR OFFICE.—*The minimum requirement of professional capacity in the case of captains, navigating and engineer officers in charge of watches on board merchant ships. (Fourth item on agenda of International Labor Conference, second discussion, report IV.)* Geneva, 1931. 106 pp.

—*Promotion of seamen's welfare in ports. (Third item on agenda of International Labor Conference, second discussion, report III.)* Geneva, 1931. 171 pp.

LEAGUE OF NATIONS.—*International health yearbook, 1929. Reports on the public health progress of forty countries and colonies in 1928.* Geneva, 1930. 1504 pp.

The volume includes, in addition to material relative to public health matters in the different countries, data on housing, industrial health and occupational diseases, and economic conditions.

—Institut International de Coopération Intellectuelle. *Bulletin de la Coopération Intellectuelle No. 1, January, 1931.* Paris, 2 Rue de Montpensier.

This bulletin, which will be published monthly, takes the place of the Review issued by the International Institute of Intellectual Cooperation during the past two years. The subject matter will include a brief summary of matters of current intellectual interest; an account of the work accomplished by the different committees of the organization and of the associations and organizations collaborating with the institute, and information upon subjects included in the program of the institute.

NETHERLAND EAST INDIES.—Departement van Landbouw, Nijverheid en Handel. Centraal Kantoor voor de Statistiek. *Mededeeling No. 88a: Prijzen, indexcijfers en wisselkoersen op Java, 1930 (voortzetting van de gelijknamige mededeeling over 1913 tot en met 1929).* [Bataviacentrum?] 1931. xviii pp., mimeographed.

ONTARIO (CANADA).—Department of Labor. *Eleventh annual report, 1930.* Toronto, 1931. 91 pp.

Includes data relating to wages and hours of labor and to strikes and lockouts.

POLAND.—Ministère du Travail et de l'Assistance Sociale. *IV annuaire des assurances sociales en Pologne, 1928.* Warsaw, [1930?]. 330 pp.; maps, charts.

SASKATCHEWAN (CANADA).—Department of Natural Resources. *Report of the Saskatchewan Royal Commission on Immigration and Settlement, 1930.* Regina, 1930. 206 pp.; maps, charts.

Among the many recommendations made by the commission were the following: That initial efforts should be given to provide for the settlement on the land of persons at present resident in Saskatchewan; that the Dominion Government should assist, to the extent of meeting one-half of their transportation expenses

to Canada, in the repatriation of Canadians at present resident in the United States, to the respective Provinces from which they migrated; and that every encouragement should be given to British immigration.

TURKEY.—Office Central de Statistique. *Annuaire statistique. Deuxième volume—1929. Istanbul, 1929. 293 pp.*

This report includes, in addition to general statistics, data on hygiene and social assistance in Turkey and cost of living.

— — — — — *Troisième volume—1930. Istanbul, 1930. 469 pp.*

The yearbook presents social and economic statistics for the Turkish Republic for various years up to and including 1930.

### Unofficial

AMALGAMATED MEAT CUTTERS AND BUTCHER WORKMEN OF NORTH AMERICA. *Synopsis of proceedings of thirteenth general convention, held at Detroit, Mich., June 9 to 13, 1930. Chicago, 160 La Salle Street, 1930. 93 pp.*

Data from this report are given in this issue.

DAS, RAJANI KANTA. *Plantation labor in India. Calcutta, R. Chatterjee, 1931. 194 pp.*

DONHAM, WALLACE BRETT. *Business adrift. New York, McGraw-Hill Book Co. (Inc.), 1931. 165 pp.*

GREENE, LORENZO J., AND WOODSON, CARTER G. *The Negro wage-earner. Washington, Association for the Study of Negro Life and History (Inc.), 1538 Ninth Street NW., 1930. 388 pp.; charts.*

Sponsored by the Association for the Study of Negro Life and History, this gives a careful, factual study of the extension of the field of Negro employment since the emancipation of the race. The authors have traced the development of the Negro as a wage earner, showing his progress from one field to another, the difficulties he had to overcome, the attitude of organized workers already in the field, the effect of racial feeling, and the cumulative gains made. The purpose has been to show the general trend, and the causes underlying each industrial development, and for this purpose recourse has been had to all the sources available for facts throwing light on changes in the position of the colored worker, so that the work has become much more than a mere collection of facts and figures. The aim has been not merely statistical but interpretative, and it is presented as an economic history of the Negro since emancipation, especially as it has had a bearing upon and been affected by the history of all other employees of various races in the country.

GUNTHER, ERNST. *Sozialpolitik. Berlin-Vienna, Industrieverlag Spaeth & Linde, 1930. 186 pp.*

A treatise on social policy, especially in Germany, including chapters on labor protection, hours of labor, social insurance, labor unions, legislation affecting labor, etc.

HUBACHEK, FRANK R. *The constitutionality of small loan legislation. New York, Russell Sage Foundation, 1931. 50 pp.*

Discusses the various angles of the question of the constitutionality of the small-loans law, citing cases.

INDUSTRIAL ASSOCIATION, CINCINNATI, OHIO. *A survey of poor relief systems and care provided for aged dependents in the State of Ohio, by W. E. Odom. Cincinnati, 1930. 16 pp. 2d ed.*

INSTITUTE OF WOMEN'S PROFESSIONAL RELATIONS. *Occupations for college women: A bibliography [by Chase Going Woodhouse]. Supplement No. 1, February, 1930, to Bulletin No. 1 of North Carolina College for Women, Greensboro, N. C., 86 pp., mimeographed; Supplement No. 2, February, 1931, 22 pp., mimeographed.*



**INTER-AMERICAN CONFERENCE ON AGRICULTURE, FORESTRY, AND ANIMAL INDUSTRY.** *Under the auspices of the United States Government and the Pan American Union, Washington, D. C., September 8-20, 1930. Documentary material [on the conference]. Washington, Government Printing Office, 1930. 434 pp.*

Contains a section on agricultural economics in which are given several papers on cooperation as related to agriculture.

**INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS.** *Proceedings of first conference, held at Totnes, Devon, England, August 26 to September 6, 1929. Menasha, Wis., Collegiate Press, 1929. 357 pp.; charts, illus.*

Contains papers on agricultural cooperation in Denmark, Norway, and Finland.

— *Proceedings of second conference, held at Cornell University, Ithaca, N. Y., August 18-29, 1930. Menasha, Wis., Collegiate Press, 1930. 1079 pp.; maps, charts, illus.*

Includes papers on farm wages and wage regulation in England and Wales, the organization of wage earners in agriculture, research in cooperative marketing, relation of Federal Farm Board to cooperative marketing, and agricultural cooperation in Finland, United States, and Canada.

**INTERNATIONAL FEDERATION OF TRADE-UNIONS.** *The activities of the International Federation of Trade-Unions, 1927-1930. Amsterdam (W), 31 Tesselschadestraat, 1931. 395 pp., illus.*

Includes the proceedings of the Fifth Ordinary Congress of the International Federation of Trade-Unions, held at Stockholm in July, 1930, with various reports and papers submitted to that convention. Among these documents is the federation's draft social legislation program, a brief resumé of which was given in the April, 1931, issue of the Labor Review.

**LAILER, HARRY W.** *Unemployment and its remedies. New York, League for Industrial Democracy, 112 East Nineteenth Street, 1931. 103 pp.*

**LASKER, BRUNO.** *Filipino immigration. Chicago, University of Chicago Press, 1931. 445 pp.; maps, illus.*

This report, which is declared in the foreword to be admittedly incomplete on many phases, has been accepted by the research committee of the American council of the Institute of Pacific Relations as one of a number of publications which the committee intends to submit at the China conference of the institute in the fall of 1931.

**LONIGAN, EDNA.** *Unemployment in New York City. New York, Welfare Council of New York City, Research Bureau, 1931. 56 pp.*

In this publication the number of unemployed in New York City is estimated by two methods, and both the methods and results are shown.

**MANUFACTURERS ASSOCIATION OF CONNECTICUT (INC.).** *Old age dependency in Connecticut. Hartford, 1931. 180 pp.; chart.*

**MATHEWSON, STANLEY B.** *Restriction of output among unorganized workers. New York, Viking Press, 1931. 212 pp.*

Reviewed in this issue.

**NATIONAL FEDERATION OF SETTLEMENTS.** *Unemployment Committee. Case studies of unemployment. Philadelphia, University of Pennsylvania Press, 1931. 418 pp. (Research studies XII, Industrial Research Department, Wharton School of Finance and Commerce.)*

The effects of unemployment on 150 workers' families are described in this volume. In each case history the nationality, family composition, and ages of the various members of the family are shown, and the economic, physical, and psychological effects of unemployment, as well as the probable future results of these factors, are outlined.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *The present status of mutual benefit associations.* New York, 247 Park Avenue, 1931. 104 pp.

Reviewed in this issue.

— *The support of the aged: A review of conditions and proposals.* New York, 247 Park Avenue, 1931. 65 pp.

— *Wages in the United States, 1914-1930.* New York, 247 Park Avenue, 1931. 226 pp.; charts.

The eighteenth volume on wage conditions in the United States published by the National Industrial Conference Board. The branches of industry covered are manufacturing, public utilities, Class I railroads, building, and agriculture. In addition to the wage data, figures are given on working hours and employment.

PENNSYLVANIA HOUSING AND TOWN PLANNING ASSOCIATION. *Report, 1929 and 1930.* Philadelphia, 803 Allman Building, [1931?]. 23 pp., illus.

PERSONS, WARREN M. *Forecasting business cycles.* New York, John Wiley & Sons (Inc.), 1931. 295 pp.; charts.

PIPKIN, CHARLES W. *Social politics and modern democracies.* New York, Macmillan Co., 1931. 2 vols.

In both England and France, the author holds, there has been an increasing democratic consciousness demanding a liberty for the citizen for which the old forms and institutions provided no satisfaction. The legislation on industrial and social questions has gradually responded to the demand, working along different lines in the two countries, influenced by the natural disposition of the people and by the circumstances of national development. Much of the progress of the present century is based upon the preparations made by England and France through the earlier days to use the machinery of their governments to change social and economic conditions. A historical survey of the preparatory period is followed by a review of the legislation of the twentieth century dealing with industrial and social matters, and this by a study of the methods adopted to make the legislation accomplish the purposes intended, or to enlarge the purpose and adapt the legislation accordingly. The first volume deals with England, the second with France, and a general survey of the present situation of the country concerned closes each volume.

SAPOSS, DAVID J. *The labor movement in postwar France.* New York, Columbia University Press, 1931. 508 pp. (*Social and economic studies of postwar France*, Vol. IV, Columbia University Council for Research in the Social Sciences.)

This is an exhaustive study of the development of the different union and syndical organizations in France, with particular reference to the period since the war. The report deals particularly with the actual functioning of the different labor parties rather than with the theoretical and philosophical phases of the movement, and covers in addition the development of labor legislation, the post-war policies of employers, the cooperative movement, and the political activities of the workers' organizations.

VAN DRIEL, B. M. *Mortality rates and causes of death among 318,071 estate laborers in Sumatra (Dutch East Indies) in 1930.* Medan, Sumatra, 1930. 64 pp., charts. (*Mededeelingen van het Pathologisch Laboratorium te Medan, Sumatra*, No. 9, 1930.)

WARBURTON, W. H. *The history of trade-union organizations in the North Staffordshire potteries.* London, George Allen & Unwin (Ltd.), 1931. 288 pp.

A description of a century's efforts to create a stable organization with the capacity to negotiate with employers.

WARREN, HERBERT, AND DAVIDGE, W. R., EDITORS. *Decentralization of population and industry.* London, P. S. King & Son (Ltd.), 1930. 154 pp.

Papers by several authors dealing with the application of the principles of town planning to the purpose of controlling the growth of towns. Large aggregations of population, the authors hold, are unhealthy and uneconomic, and industries now located in cities should be encouraged to withdraw, and new industries should establish themselves from the beginning in more suitable locations. For the industries this would mean cheaper land and lower taxes; for the workers, health and clean and pleasant surroundings; while for the cities it would mean a diminution of congestion and the possibility of using the industrial sites for open spaces, recreational centers, and the like. Various aspects of the measures needed to make such decentralization possible and beneficial are discussed by experts in the different lines.

